UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION

IN RE: AQUEOUS FILM-FORMING FOAMS PRODUCTS LIABILITY LITIGATION	MDL No. 2873 Master Docket No. 2:18-mn-2873 Judge Richard Gergel Civil Action No.:
LAWRENCE KONIECKI, **Plaintiff,** **v.** **3M COMPANY (f/k/a Minnesota Mining and Manufacturing Company);** **AGC CHEMICALS AMERICAS INC.;** **AMEREX CORPORATION;** **ANGUS FIRE ARMOUR CORPORATION;** **ARCHROMA U.S., INC.;** **ARKEMA INC.;** **BASF CORPORATION;** **BUCKEYE FIRE EQUIPMENT COMPANY;** **CARRIER FIRE & SECURITY AMERICAS CORP., INC.;** **CARRIER GLOBAL CORPORATION;** **CHEMDESIGN PRODUCTS, INC.;** **CHEMGUARD INC.;** **CHEMICALS, INC.;** **CLARIANT CORPORATION;** **CORTEVA, INC.;** **DEEPWATER CHEMICALS, INC.;** **DUPONT DE NEMOURS, INC.** **DYNAX CORPORATION;** **E. I. DUPONT DE NEMOURS AND COMPANY;** **MINE SAFETY APPLIANCES COMPANY, LLC;** **NATION FORD CHEMICAL COMPANY;** **NATIONAL FOAM, INC.;** **PERIMETER SOLUTIONS, LP;** **RAYTHEON TECHNOLOGIES CORPORATION;**	**DIRECT FILED COMPLAINT AND DEMAND FOR JURY TRIAL PURSUANT TO CASE MANAGEMENT ORDER NO. 3**

ROYAL CHEMICAL COMPANY, LTD.; **THE CHEMOURS COMPANY;** **THE CHEMOURS COMPANY FC, LLC;** **TYCO FIRE PRODUCTS, LP;** **and JOHN DOE DEFENDANTS 1-20,** Defendants.	

COMPLAINT

Plaintiff, LAWRENCE KONIECKI ("Plaintiff"), by and through Plaintiff's undersigned counsel, hereby files this Complaint against Defendants 3M COMPANY, f/k/a Minnesota Mining and Manufacturing Company, AGC CHEMICALS AMERICAS INC., AMEREX CORPORATION, ARCHROMA U.S., INC., ANGUS FIRE ARMOUR CORPORATION, ARKEMA INC., BASF CORPORATION, BUCKEYE FIRE EQUIPMENT COMPANY, CARRIER FIRE & SECURITY AMERICAS CORP., INC., CARRIER GLOBAL CORPORATION, CHEMDESIGN PRODUCTS, INC., CHEMGUARD INC., CHEMICALS, INC., CLARIANT CORPORATION, CORTEVA, INC., DEEPWATER CHEMICALS, INC., DUPONT DE NEMOURS, INC., DYNAX CORPORATION, E. I. DUPONT DE NEMOURS AND COMPANY, MINE SAFETY APPLIANCES COMPANY, LLC, NATION FORD CHEMICAL COMPANY, NATIONAL FOAM, INC., PERIMETER SOLUTIONS, LP, RAYTHEON TECHNOLOGIES CORPORATION, ROYAL CHEMICAL COMPANY, LTD., THE CHEMOURS COMPANY, THE CHEMOURS COMPANY FC, LLC, TYCO FIRE PRODUCTS, LP, and JOHN DOE DEFENDANTS 1-20, fictitious names whose present identities are unknown (collectively, "Defendants"), and alleges, upon information and belief, as follows:

INTRODUCTION

1. Plaintiff brings this action for damages for personal injury resulting from exposure to aqueous film-forming foams ("AFFF") containing the toxic chemicals collectively

known as per and polyfluoroalkyl substances ("PFAS"). PFAS includes, but is not limited to, perfluorooctanoic acid ("PFOA") and perfluorooctane sulfonic acid ("PFOS") and related chemicals including those that degrade to PFOA and/or PFOS.

2. Upon information and belief, PFAS, known as "forever chemicals" because they resist biodegradation, persist in the environment, and accumulate in people and other living organisms, have contaminated the land, air, and water, through the use of AFFF containing PFAS for fire suppression activities.

3. AFFF is a specialized substance designed to extinguish petroleum-based fires.

4. Defendants' AFFF contained PFOS, PFOA, PFBS, and/or the chemical precursors to PFOS and/or PFBS.

5. PFAS binds to proteins in the blood of humans exposed to the material and remains and persists over long periods of time. Due to their unique chemical structure, PFAS accumulates in the blood and body of exposed individuals.

6. PFAS are man-made compounds that are persistent, toxic, and bioaccumulative when released into the environment, and pose a significant risk to human health and safety.

7. PFAS are highly toxic and carcinogenic chemicals. Defendants knew, or should have known, that PFAS remains in the human body while presenting significant health risks to humans.

8. Not knowing the true nature of the products consumers were required to use, PFAS, and/or AFFF containing PFAS has been used for decades by military and civilian firefighters to extinguish fires in training and in response to Class B fires.

9. Through this action, Plaintiff seeks to recover compensatory and punitive damages, costs incurred and to be incurred by Plaintiff, and any other damages that the Court or

jury may deem appropriate for bodily injury arising from the intentional, malicious, knowing, reckless and/or negligent acts and/or omissions of Defendants in connection with the permanent and significant damages sustained as a direct result of exposure to Defendants' AFFF products at various locations during the course of Plaintiff's training and firefighting activities. Plaintiff further seeks injunctive, equitable, and declaratory relief arising from the same.

JURISDICTION AND VENUE

10. This Court has jurisdiction over this action pursuant to 28 U.S.C. § 1332(a) because complete diversity exists between Plaintiff and Defendants and the amount in controversy exceeds $75,000.00

11. Venue is proper in this District Court pursuant to this Court's Case Management Order No. 3 ("CMO No. 3"). Plaintiff states that but for the Order permitting direct filing in the United States District Court for the District of South Carolina, Plaintiff would have filed this Complaint in the United States District Court for the Northern District of Illinois. Further, in accordance with CMO No. 3, Plaintiff designates the United States District Court for the Northern District of Illinois as the home venue. Venue is originally proper in the District Court pursuant to 28 U.S.C. §1391 because it is the judicial district in which Plaintiff was a resident and/or citizen, a substantial part of the events or omissions giving rise to the claims occurred, and Defendants conduct business within the district.

12. The United States District Court for the Northern District of Illinois has personal jurisdiction over the Defendants because at all times relevant to this lawsuit, the Defendants manufactured, designed, marketed, distributed, released, promoted and/or otherwise sold (directly or indirectly) PFAS-containing AFFF products to various locations, such that each Defendant knew or should have known that said products would be delivered to areas in the state

of Illinois for active use by Plaintiff during the course of training and firefighting activities. Therefore, the exercise of jurisdiction over the Defendants by the United States District Court for the Northern District of Illinois does not offend traditional notions of fair play and substantial justice.

PARTIES

13. LAWRENCE KONIECKI ("Plaintiff") is a citizen of the United States of America and a current resident of Amboy, Illinois.

14. Plaintiff regularly used, and was thereby directly exposed to, AFFF in training and during Plaintiff's service in the United States Navy.

15. Defendants' PFAS-containing AFFF products were used by the Plaintiff in their intended manner, without significant change in the products' condition. Plaintiff was unaware of the dangerous properties of the Defendants' AFFF products and relied on the Defendants' instructions as to the proper handling of the products.

16. Plaintiff's consumption, inhalation and/or dermal absorption of PFAS from Defendant's AFFF products, directly and proximately, caused Plaintiff to develop the serious medical conditions and complications alleged herein, and to suffer severe personal injuries, pain, suffering, and emotional distress.

DEFENDANTS

17. The term "Defendant" or "Defendants" refers to all Defendants named herein jointly and severally.

18. Any and all references to a Defendant or Defendants in this Complaint include any predecessors, successors, parents, subsidiaries, affiliates and divisions of the named Defendants.

19. When reference is made in this complaint to any act or omission of any of the

Defendants, it shall be deemed that the officers, directors, agents, employees, or representatives of the defendants committed or authorized such act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation, or control of the affairs of defendants, and did so while acting within the scope of their duties, employment or agency.

20. At all times relevant to this litigation, upon information and belief, each of the Defendants collectively designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold, and/or otherwise released into the stream of commerce AFFF with knowledge that it contained highly toxic and bio persistent PFASs, which would expose end users of the product to the risks associated with PFAS.

21. Further, defendants designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used underlying chemicals and/or products added to AFFF which contained PFAS for use in firefighting.

22. Defendant **3M Company f/k/a Minnesota Mining and Manufacturing Co.** ("3M") is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 3M Center, St. Paul, Minnesota 55144-1000.

23. Beginning before 1970 and until at least 2002, 3M designed, manufactured, marketed, distributed, and sold PFAS, and/or AFFF containing PFAS, including but not limited to PFOA and PFOS.

24. Defendant **Amerex Corporation** ("Amerex") is a corporation organized and existing under the laws of the State of Alabama, with its principal place of business located at 7595 Gadsden Highway, Trussville, Alabama 35173.

25. Amerex is a manufacturer of firefighting products. Beginning in 1971, it was a manufacturer of hand portable and wheeled extinguishers for commercial and industrial applications.

26. In 2011, Amerex acquired Solberg Scandinavian AS, one of the largest manufacturers of AFFF products in Europe.

27. On information and belief, beginning in 2011, Amerex designed, manufactured, marketed distributed, and sold PFAS, and/or AFFF containing PFAS, including but not limited to PFOA and PFOS.

28. Defendant **AGC Chemicals Americas, Inc.** ("AGC") is a corporation organized and existing under the laws of the State of Delaware, having its principal place of business at 55 East Uwchlan Avenue, Suite 201, Exton, Pennsylvania 19341.

29. On information and belief, AGC was formed in 2004 and is a subsidiary of AGC Inc., a foreign corporation organized under the laws of Japan, with its a principal place of business in Tokyo, Japan.

30. AGC manufactures specialty chemicals. It offers glass, electronic displays, and chemical products, including resins, water and oil repellants, greenhouse films, silica additives, and various fluorointermediates.

31. On information and belief, AGC designed, manufactured, marketed, distributed, and sold perfluorochemicals ("PFCs") containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in PFAS, and/or AFFF products.

32. Defendant **Angus Fire Armour Corporation** ("Angus Fire") is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 141 Junny Road, Angier, North Carolina 27501.

33. Angus Fire manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF and has done business throughout the United States, including Florida.

34. On information and belief, National Foam merged with Chubb Fire Ltd. to form Chubb National Foam, Inc. in or around 1988.

35. On information and belief, Chubb (defined below) is or has been composed of different subsidiaries and/or divisions, including but not limited to, Chubb Fire & Security Ltd., Chubb Security, PLC, Red Hawk Fire & Security, LLC, and/or Chubb National Foam, Inc. (collectively, "Chubb").

36. On information and belief, Chubb was acquired by Williams Holdings in 1997.

37. On information and belief, Angus Fire Armour Corporation had previously been acquired by Williams Holdings in 1994.

38. On information and belief, Williams Holdings was demerged into Chubb and Kidde P.L.C. in or around 2000.

39. On information and belief, when Williams Holdings was demerged, Kidde P.L.C. became the successor in interest to National Foam System, Inc., and Angus Fire Armour Corporation.

40. On information and belief, Kidde P.L.C. was acquired by United Technologies Corporation in or around 2005.

41. On information and belief, Angus Fire Armour Corporation and National Foam separated from United Technologies Corporation in or around 2013.

42. Following United Technologies Corporation's acquisition of Kidde P.L.C., United Technologies Corporation combined Kidde P.L.C.'s firefighting business with that of Chubb plc, an affiliate of Defendant Chubb Fire, Ltd., which United Technologies Corporation acquired in

2003.

43. Chubb Fire, Ltd. was a corporate affiliate of Kidde Fenwal, Inc. during the period when it sold AFFF.

44. Defendant **Archroma U.S., Inc**. ("Archroma") is a corporation organized and existing under the laws of the State of Delaware, with its a principal place of business at 5435 77 Center Drive, Charlotte, North Carolina 28217.

45. On information and belief, Archroma was formed in 2013 when Clariant Corporation divested its textile chemicals, paper specialties, and emulsions business to SK Capital Partners.

46. On information and belief, Archroma designed, manufactured, marketed, distributed, and sold PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in PFAS, and/or AFFF products.

47. Defendant **Arkema Inc.** is a corporation organized and existing under the laws of the State of Pennsylvania, with its principal place of business at 900 First Avenue, King of Prussia, Pennsylvania 19406.

48. Arkema Inc. develops specialty chemicals and polymers.

49. Arkema, Inc. is an operating subsidiary of Arkema France, S.A.

50. Arkema is a successor in interest to Elf Atochem North America and Atofina Chemicals Inc., which manufactured fluorosurfactants containing PFOA that was used in AFFF.

51. On information and belief, Arkema Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in PFAS, and/or AFFF products.

52. Defendant **BASF Corporation** ("BASF") is a corporation organized under the

laws of the State of Delaware, with its principal place of business located at 100 Park Avenue, Florham Park, New Jersey 07932.

53. On information and belief, BASF is the successor-in-interest to Ciba. Inc. (f/k/a Ciba Specialty Chemicals Corporation).

54. On information and belief, Ciba Inc. designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in PFAS, and/or AFFF products.

55. Further, on information and belief, BASF is the largest affiliate of BASF SE and the second largest producer and marketer of chemicals and related products in North America.

56. Defendant **Buckeye Fire Equipment Company** ("Buckeye") is a corporation organized under the laws of the State of Ohio, with its principal place of business located at 110 Kings Road, Kings Mountain, North Carolina 28086.

57. On information and belief, Buckeye designed, manufactured, marketed, distributed, and sold PFAS, and/or AFFF products containing PFAS, including but not limited to PFOA and PFOS.

58. Defendant **Carrier Fire & Security Americas Corp., Inc.,** ("Carrier Fire") is a Delaware corporation with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, Florida 33418.

59. Upon information and belief, Carrier Fire was a division of United Technologies Corporation.

60. Carrier Fire manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF throughout the United States.

61. Carrier Fire was formerly known as UTC Fire & Security Americas Corporation,

Inc., until in or around December 2020.

62. Defendant **Carrier Global Corporation** ("Carrier") is a corporation organized under the laws of the State of Delaware, with its principal place of business at 13995 Pasteur Boulevard, Palm Beach Gardens, FL 33418.

63. On information and belief, Kidde-Fenwal was an operating subsidiary of Kidde P.L.C. and manufactured PFAS, and/or AFFF following Kidde P.L.C.'s acquisition by United Technologies Corporation.

64. In April 2005, United Technologies Corporation acquired Kidde P.L.C. from the public market. From 2000 to 2005, United Technologies Corporation was the parent company of Kidde-Fenwal, Inc., ("Kidde-Fenwal").

65. Carrier manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF through its many divisions and brands, including but not limited to Kidde-Fenwal and UTC.

66. On information and belief, Carrier was formed in March 2020 when United Technologies Corporation spun off its fire and security business before it merged with Raytheon Company in April 2020.

67. On information and belief, Kidde-Fenwal became a subsidiary of Carrier when United Technologies Corporation spun off its fire and security business in March 2020.

68. Defendant **ChemDesign Products, Inc.** ("ChemDesign") is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 2 Stanton Street, Marinette, Wisconsin 54143.

69. On information and belief, ChemDesign designed, manufactured, marketed, distributed, and sold fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in PFAS, and/or AFFF products.

70. Defendant **Chemguard, Inc.** ("Chemguard") is a corporation organized under the laws of the State of Texas, with its principal place of business located at One Stanton Street, Marinette, Wisconsin 54143.

71. On information and belief, Chemguard designed, manufactured, marketed, distributed, and sold PFAS, and/or AFFF products containing PFAS, including but not limited to PFOA and PFOS.

72. In 2003, Chemguard acquired the Ciba-Geigy Corporation's fluorosurfactants business.

73. On information and belief, Chemguard was acquired by Tyco International Ltd. in 2011.

74. On information and belief, Tyco International Ltd. later merged into its subsidiary Tyco International plc in 2014 to change its jurisdiction of incorporation from Switzerland to Ireland.

75. Defendant **Corteva, Inc.** ("Corteva") is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 974 Centre Rd., Wilmington, Delaware 19805.

76. Defendant **Dupont de Nemours Inc. f/k/a DowDuPont, Inc.** ("Dupont de Nemours, Inc.") is a corporation organized and existing under the laws of the State of Delaware, with its principal places of business at 974 Centre Road, Wilmington, Delaware 19805 and 2211 H.H. Dow Way, Midland, Michigan 48674.

77. On June 1, 2019, DowDuPont separated its agriculture business through the spin-off of Corteva.

78. Corteva was initially formed in February 2018. From that time until June 1, 2019,

Corteva was a wholly owned subsidiary of DowDuPont.

79. On June 1, 2019, DowDuPont distributed to DowDuPont stockholders all issued and outstanding shares of Corteva common stock by way of a pro-rata dividend. Following that distribution, Corteva became the direct parent of E. I. Du Pont de Nemours & Co.

80. Corteva holds certain DowDuPont assets and liabilities, including DowDuPont's agriculture and nutritional businesses.

81. On June 1, 2019, DowDuPont, the surviving entity after the spin-off of Corteva and of another entity known as Dow, Inc., changed its name to DuPont de Nemours, Inc., to be known as DuPont ("New DuPont"). New DuPont retained assets in the specialty products business lines following the above-described spin-offs, as well as the balance of the financial assets and liabilities of E. I. DuPont not assumed by Corteva.

82. On information and belief, the Defendants designed, manufactured, marketed, distributed, and sold PFAS, and/or AFFF products containing PFOS, PFOA, and/or their chemical precursors.

83. Defendant **Deepwater Chemicals, Inc.** ("Deepwater") is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 196122 E County Road 40, Woodward, Oklahoma 73801.

84. On information and belief, Deepwater designed, manufactured, marketed, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used fluorosurfactants containing PFOS, PFOA, and/or their chemical precursors for use in PFAS, and/or AFFF products that are used in firefighting training and response exercises which are the subject of this Complaint.

85. Further, defendant designed, marketed, developed, manufactured, distributed,

released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used underlying chemicals and/or products added to AFFF which contained PFAS for use in firefighting.

86. Defendant **E.I. du Pont de Nemours & Company** ("Old DuPont") is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 974 Centre Road, Wilmington, Delaware 19805.

87. Old DuPont is a successor in interest to DuPont Chemical Solutions Enterprise ("DuPont Chemical"), a Delaware corporation with a principal place of business located at 1007 Market Street, Wilmington, Delaware 19898.

88. DuPont Chemical was a member of the Telomer Research Program ("TRP"). As a member it was required to provide a list and volume of products it was selling in the United States on a yearly basis.

89. In a letter addressed to the Office of Pollution Prevention and Toxics (OPPT) Document Control Office, dated May 14, 2003 and signed by Stephen H. Karnowski, DuPont provided its Telomer-based sales products in the United States for the year 2002.

90. The letter, which was redacted and sent to the USEPA under its PFOA Stewardship Program, included AFFF sales volume, on an active ingredient pound basis, as well as its Chemical Abstracts Service (CAS) number and chemical name, and is included in the PFOA Stewardship Program Docket.

91. Defendant **Chemicals, Inc.** is a corporation organized and existing under the laws of the State of Texas, with its principal place of business located at 12321 Hatcherville, Baytown, Texas 77520.

92. On information and belief, Chemicals, Inc. designed, marketed, developed,

manufactured, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used in PFAS, and/or AFFF products that are used in firefighting training and response exercises which are the subject of this Complaint.

93. Further, defendant designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used underlying chemicals and/or products added to AFFF which contained PFAS for use in firefighting.

94. Defendant **Clariant Corporation** ("Clariant") is a corporation organized and existing under the laws of the State of New York, with its principal place of business at 1600 West Hill Street, Louisville, Kentucky 40210.

95. On information and belief, Clariant is the successor in interest to the specialty chemicals business of Sandoz Chemical Corporation ("Sandoz").

96. On information and belief, Sandoz spun off its specialty chemicals business to form Clariant in 1995.

97. On information and belief, Clariant supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in PFAS, and/or AFFF products.

98. Defendant **Dynax Corporation** ("Dynax") is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 103 Fairview Park Drive, Elmsford, New York 10523.

99. On information and belief, Dynax entered into the PFAS, and/or AFFF market on or about 1991 and quickly became a leading global producer of fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors.

100. On information and belief, Dynax designed, manufactured, marketed, distributed, and sold fluorosurfactants and fluorochemical stabilizers containing PFOS, PFOA, and/or their chemical precursors for use in PFAS, and/or AFFF products.

101. Defendant **Mine Safety Appliances Company, LLC** ("Mine Safety") is a Pennsylvania limited liability company with a principal place of business located at 1000 Cranberry Woods Drive, Cranberry Township, Pennsylvania 16066.

102. Mine Safety manufactured, sold, or distributed PFAS, and/or AFFF throughout the United States, including Florida.

103. Defendant **Nation Ford Chemical Co.** ("Nation Ford") is a corporation organized and existing under the laws of the State of South Carolina, with its principal place of business located at 2300 Banks Street, Fort Mill, South Carolina 29715.

104. On information and belief, Nation Ford designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, sold, and/or otherwise handled and/or used AFFF containing PFAS that are the subject of this Complaint.

105. Further, defendant designed, marketed, developed, manufactured, distributed, released, trained users, produced instructional materials, promoted, sold and/or otherwise handled and/or used underlying chemicals and/or products added to AFFF which contained PFAS for use in firefighting.

106. On information and belief, 3M, ChemDesign, Deepwater, and DuPont also supplied PFCs containing PFOS, PFOA, and/or their chemical precursors for use in manufacturing the fluorosurfactants used in PFAS, and/or AFFF products.

107. Specifically, from 1951, Old DuPont, and on information and belief, Chemours, designed, manufactured, marketed, and sold Fluorosurfactant Products, including Teflon nonstick

cookware, and more recently PFAS feedstocks, such as Forafac 1157N, for the use in the manufacture of PFAS, and/or AFFF products.

108. Based on information and belief, by no later than 2001, Old DuPont manufactured, produced, marketed, and sold Fluorosurfactant Products and/or PFAS feedstocks containing or degrading into PFOA, to some or all of the AFFF product manufacturers for use in their PFAS, and/or AFFF products that were discharged into the environment.

109. Defendant **National Foam, Inc.** ("National Foam") is a corporation organized under the laws of the State of Delaware, with its principal place of business located at 141 Junny Road, Angier, NC 27501.

110. Beginning in or around 1973, National Foam designed, manufactured, marketed, distributed, and sold PFAS, and/or AFFF containing PFAS, including but not limited to PFOA and PFOS.

111. On information and belief, National Foam currently manufactures the Angus brand of PFAS, and/or AFFF products and is a subsidiary of Angus International Safety Group, a United Kingdom private limited company.

112. On information and belief, Kidde-Fenwal, through its subsidiary, Kidde Fire Fighting, Inc., divested the PFAS, and/or AFFF business unit now operated by National Foam in 2013.

113. Defendant **Perimeter Solution, LP** ("Perimeter") is a limited partnership organized and existing under the laws of the State of Delaware, with its principal place of business at 8000 Maryland Avenue, Suite 350, Clayton, Missouri 63105.

114. Perimeter does business throughout the United States, including conducting business throughout Florida.

115. In 2019, Perimeter purchased the Solberg products division of Amerex.

116. Solberg manufactured, sold, and/or distributed fire safety products, including AFFF.

117. Perimeter is the successor-in-interest to Solberg.

118. Perimeter manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF throughout the United States, including Florida.

119. Defendant **Raytheon Technologies Corporation** ("Raytheon") is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business at 10 Farm Springs Road, Farmington, Connecticut 06032.

120. Raytheon conducts business throughout the United States, including throughout Florida.

121. Upon information and belief, United Technologies Corporation ("UTC") merged with Raytheon Company to form Raytheon Technologies in or around April 2020.

122. Raytheon was formerly known as United Technologies Corporation until in or around April 2020.

123. On information and belief, Raytheon manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF throughout Florida.

124. Defendant **Royal Chemical Company, Ltd**. ("Royal Chemical") is a corporation organized and existing under the laws of the State of Ohio, with its principal place of business at 8679 South Freeway Drive, Macedonia, Ohio 44056.

125. On information and belief, Royal Chemical manufactured, sold, marketed, and/or distributed PFAS, and/or AFFF throughout the United States, including Florida.

126. Defendant **The Chemours Company** ("Chemours Co.") is a corporation

organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, P.O. Box 2047, Wilmington, Delaware 19899.

127. In 2015, Old DuPont spun off its performance chemicals business to Chemours Co., along with vast environmental liabilities which Chemours Co. assumed, including those related to PFOS and PFOA and fluorosurfactants.

128. On information and belief, Chemours Co. has supplied fluorosurfactants containing PFOS and PFOA, and/or their chemical precursors to manufacturers of PFAS, and/or AFFF products.

129. On information and belief, Chemours Co. was incorporated as a subsidiary of DuPont as of April 30, 2015. From that time until July 2015, Chemours Co. was a wholly owned subsidiary of DuPont.

130. In July 2015, DuPont spun off Chemours Co. and transferred to Chemours Co. its "performance chemicals" business line, which includes its fluoroproducts business, distributing shares of Chemours Co. stock to DuPont stockholders, and Chemours Co. has since been an independent, publicly traded company.

131. Upon information and belief, at the time of the transfer of its performance chemicals business to Chemours, DuPont had been sued, threatened with suit and/or had knowledge of the likelihood of litigation to be filed regarding DuPont's liability for damages and injuries arising from the manufacture and sale of fluorochemicals and the products that contain fluorochemicals.

132. Defendant **The Chemours Company FC, LLC** ("Chemours FC") is a limited liability company organized under the laws of the State of Delaware, with its principal place of business located at 1007 Market Street, Wilmington, Delaware 19899.

133. On information and belief, Chemours FC has supplied fluorosurfactants containing PFOS and PFOA, and/or their chemical precursors to manufacturers of PFAS, and/or AFFF products.

134. Defendant **Tyco Fire Products LP** ("Tyco") is a limited partnership organized under the laws of the State of Delaware, with its principal place of business located at 1400 Pennbrook Parkway, Lansdale, Pennsylvania 19446.

135. Upon information and belief, Tyco is a subsidiary of Johnson Controls International PLC.

136. Tyco is the successor in interest to the corporation formerly known as The Ansul Company ("Ansul"), having acquired Ansul in 1990.

137. Beginning in or around 1975, Ansul manufactured and/or distributed and sold AFFF that contained PFOA and PFOA. After Tyco acquired Ansul in 1990, Tyco/Ansul continued to manufacture, distribute and sell AFFF that contained PFOA and PFOS.

138. Upon information and belief, Tyco acquired the Chemguard brand in 2011 and continues to sell Chemguard AFFF products through its Chemguard Specialty Chemicals division.

139. Doe Defendants 1-20 are unidentified entities or persons whose names are presently unknown and whose actions, activities, omissions (a) may have directly and proximately permitted, caused and/or contributed to the development of Plaintiff's serious medical conditions and complications alleged herein, and severe personal injuries, pain, suffering, and emotional distress; or (b) may be vicariously responsible for entities or persons who permitted, caused and/or contributed to the development of Plaintiff's serious medical conditions and complications alleged herein, and severe personal injuries, pain, suffering, and emotional distress;

or (c) may be successors in interest to entities or persons who permitted, caused and/or permitted, contributed to the development of Plaintiff's serious medical conditions and complications alleged herein, and severe personal injuries, pain, suffering, and emotional distress. After reasonable search and investigation to ascertain the Doe Defendants' actual names, Doe Defendants' actual identities are unknown to Plaintiff as they are not linked with any Defendants on any public source.

140. Doe Defendants 1-20, either in their own capacity or through a party they are liable for: (1) designed, manufactured, marketed, distributed, and/or sold PFAS, and/or AFFF products containing PFOS, PFOA, and/or their chemical precursors, and/or designed, manufactured, marketed, distributed, and/or sold the fluorosurfactants contained in PFAS, and/or AFFF Component Products; or (2) used, handled, transported, stored, discharged, disposed of, designed, manufactured, marketed, distributed, and/or sold PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors; or (3) failed to timely perform necessary and reasonable response and remedial measures to releases of PFOS, PFOA, and/or their chemical precursors, or other non-AFFF products containing PFOS, PFOA, and/or their chemical precursors exposing end users of the product to the risks associated with PFAS.

141. Defendants, at all times material herein, acted by and through their respective agents, servants, officers and employees, actual or ostensible, who then and there were acting within the course and scope of their actual or apparent agency, authority or duties. Defendants are liable based on such activities, directly and vicariously.

142. Defendants represent all or substantially all of the market for PFAS, and/or AFFF/ fluorinated surfactants products ("Fluorosurfactant Products") relevant to the allegations

contained herein.

FACTUAL ALLEGATIONS

1. The Fluorochemicals

143. Fluorochemical products are man-made chemicals composed of a chain of carbon atoms in which all but one of the carbon atoms are bonded to fluorine atoms, and the last carbon atom is attached to a functional group. The carbon-fluorine bond is one of the strongest chemical bonds that occur in nature, which is a reason why these molecules are so persistent. Fluorochemical products that contain eight carbon-fluorine bonds are sometimes referred to as "C8."

144. Fluorochemical products are highly water soluble, which facilitates the ease at which they spread throughout the environment, contaminating soil, groundwater, and surface water. This mobility is made more dangerous by their persistence in the environment and resistance to biologic, environmental, or photochemical degradation.

145. Fluorochemical products are readily absorbed in animal and human tissues after oral exposure and accumulate in the serum, kidney, and liver. They have been found globally in water, soil, and air as well as in human food supplies, breast milk, umbilical cord blood, and human blood serum.

146. Fluorochemical products are persistent in the human body. A short-term exposure can result in a body burden that persists for years and can increase with additional exposures.

147. Since they were first produced, information has emerged showing negative health effects caused by exposure to fluorochemical products.

148. According to the United States Environmental Protection Agency ("EPA"), studies indicate that exposure to fluorochemical products over certain levels may result in

developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes).

149. The EPA has also warned that there is suggestive evidence of carcinogenic potential for fluorochemical products.

150. The EPA has noted that drinking water can be an additional source of PFC's in the small percentage of communities where these chemicals have contaminated water supplies." In communities with contaminated water supplies, such contamination is typically localized and associated with a specific facility, for example…an airfield at which fluorochemical products were used for firefighting."

2. Manufacture and Use of Aqueous Film-Forming Foam ("AFFF")

151. AFFF is a synthetically formed fluorochemical mixture by combining fluorine free hydrocarbon foaming agents with surfactants (fluorinated surfactants). When mixed with water, the resulting solution produces an aqueous film that spreads across the surface of hydrocarbon fuel. This film provides fire extinguishment and is the source of the designation aqueous film forming foam.

152. AFFF is a Class-B firefighting foam. It is mixed with water and used to extinguish fires that are difficult to fight, particularly those that involve petroleum or other flammable liquids.

153. Although AFFF can be made without PFOA, PFOS, PFBS, or their precursor chemicals, AFFF containing fluorinated surfactants have a better firefighting capability than plain water due to their surface-tension lowering properties- essentially smothering the fire and starving it of its oxygen.

154. However, some fluorinated surfactants have unique properties that cause some of the compounds to not biodegrade and to bioaccumulate and are toxic to animals and humans.

155. AFFF was introduced commercially in the mid-1960s and rapidly became the primary firefighting foam in the U.S. and in many parts of the world.

156. When used as the Defendants intended and directed, Defendants' AFFF releases PFOA, PFOS, PFBS, and/or their precursor chemicals into the environment.

157. Defendants manufacture products that contain fluorocarbon surfactants believed to include PFOS, PFOA, and/or certain other PFCs that degrade into PFAS.

158. PFCs are man-made chemicals that do not exist in nature.

159. In the foam industry, concentrates are typically referred to as "3%" or "6%" concentrate, depending on the mixture rate with water. AFFF concentrates contain about 60-90% water and have a fluorine content of about 0.3 – 1.8%.

160. 3M began producing PFOS and PFOA through a unique and patented process known as electrochemical fluorination ("ECF") in the 1940s. The ECF process resulted in a product that contains PFOS, some of which degrades into PFOA.

161. In 1951, 3M began selling its PFOA to other chemical companies, including DuPont.

162. In the 1960s, 3M used its fluorination process to develop AFFF.

163. 3M manufactured, marketed, and sold AFFF from the 1960s to the early 2000s.

164. 3M was the only company to manufacture PFOS-containing AFFF.

165. In an attempt to limit liability, 3M opted to stop producing PFOS in 2002 because it was aware of the looming chemical exposure and health effects on the public.

166. Similarly, PFOA is a man-made, manufactured chemical not found in nature.

PFOA was used to make household and commercial products that resist heat and chemical reactions, and has many uses, including repelling oil, stains, grease, and water.

167. All other Defendants except 3M manufactured fluorosurfactants for use in AFFF through the process of telomeritzation and/or manufactured AFFF containing fluorosurfactants manufactured through the process of telomerization. Telomerization produces fluorotelomers, including PFOA and/or the chemical precursors to PFOA.

168. For instance, other companies, such as Defendants Tyco/Ansul, Buckeye, National Foam, and Chemguard began manufacturing AFFF using PFOA that they produced themselves or purchased from other companies. Defendants' AFFF was then manufactured for use at airports, fire departments, and industrial facilities across the nation.

169. National Foam and Tyco/Ansul began to manufacture, market and sell AFFF in the 1970s.

170. Buckeye began to manufacture, market, and sell AFFF in the 2000s.

171. In 2000, 3M announced it was phasing out its manufacture of PFOS, PFOA, and related products, including AFFF. 3M, in its press release announcing the phase out, stated "our products are safe," and that 3M's decision was "based on [its] principles of responsible environment management." 3M further stated that "the presence of these materials at [] very low levels does not pose a human health or environmental risk." In communications with the EPA at that time, 3M also stated that it had "concluded that…other business opportunities were more deserving of the company's energies and attention…"

172. Following 3M's exit from the AFFF market, the remaining Defendants continued to manufacture and sell AFFF that contained PFAS and/or its precursors.

173. Defendants knew their customers warehoused large stockpiles of AFFF. In fact,

Defendants marketed their AFFF products by touting its shelf-life. Even after Defendants fully understood the toxicity of PFAS, and their impacts to the health of humans following exposure, Defendants concealed the true nature of PFAS. While Defendants phased out production or transitioned to other formulas, they did not instruct their customers that they should not use AFFF that contained PFAS and/or their precursors. Defendants further did not act to get their harmful products off the market.

174. Defendants did not warn public entities, firefighter trainees who they knew would foreseeably come into contact with their AFFF products, or firefighters employed by either civilian and/or military employers that use of and/or exposure to Defendants' AFFF products containing PFAS and/or its precursors would pose a danger to human health.

175. Defendants have known of the health hazards associated with AFFF and/or its compounds for decades and that in their intended and/or common use would harm human health.

176. Information regarding AFFF and its compounds were readily accessible to each of the above-referenced Defendants for decades because each is an expert in the field of AFFF manufacturing and/or the materials needed to manufacture AFFF, and each has detailed information and understanding about the chemical compounds that form AFFF products.

177. Defendants through their manufacturing, distribution, and/or sale of AFFF, and through their involvement and/or participation in the creation of training and instructional materials and activities, knew, foresaw, and/or should have known and/or foreseen that the Plaintiff and those similarly situated would be harmed.

178. Defendants' products were unreasonably dangerous and the Defendants failed to warn of this danger.

3. Health Advisories, Health Effects, and Regulations to PFAS

179. AFFF and its components are associated with a wide variety of adverse health

effects in humans.

180. Exposure to Defendants' AFFF has been linked to serious medical conditions including, but not limited to, kidney cancer, testicular cancer, liver cancer, testicular tumors, pancreatic cancer, prostate cancer, leukemia, lymphoma, bladder cancer, thyroid disease, and infertility.

181. By at least the end of the 1960s, animal toxicity testing performed by Defendants manufacturing and/or using PFAS indicated that exposure to such materials, including at least PFOA, resulted in various adverse health effects among multiple species of laboratory animals, including toxic effects to the liver, testes, adrenals, and other organs and bodily systems.

182. By at least the end of the 1960s, additional research and testing performed by Defendants manufacturing and/or using PFAS indicated that such materials, including at least PFOA, because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

183. By at least the end of the 1970s, additional research and testing performed by Defendants manufacturing and/or using PFAS indicated that one or more such materials, including at least PFOA and PFOS, because of their unique chemical structure, would bind to proteins in the blood of animals and humans exposed to such materials where such materials would remain and persist over long periods of time and would accumulate in the blood/body of the exposed individuals with each additional exposure.

184. It was understood by Defendants by at least the end of the 1980s that a chemical that caused cancer in animal studies must be presumed to present a cancer risk to humans, unless the precise mechanism of action by which the tumors were caused was known and would not occur in humans.

185. By at least the end of the 1980s, scientists had not determined the precise mechanism of action by which any PFAS caused tumors. Therefore, scientific principles of carcinogenesis classification mandated Defendants presume any such PFAS material that caused tumors in animal studies could present a potential cancer risk to exposed humans.

186. By at least the end of the 1980s, Defendants, including at least 3M and DuPont, understood that, not only did PFAS, including at least PFOA and PFOS, get into and persist and accumulate in the human blood and in the human body, but that once in the human body and blood, particularly the longer-chain PFAS, such as PFOS and PFOA, had a long half-life. Meaning that it would take a very long time before even half of the material would start to be eliminated, which allowed increasing levels of the chemicals to build up and accumulate in the blood and/or body of exposed individuals over time, particularly if any level of exposure continued.

187. By at least the end of the 1990s, additional research and testing performed by Defendants manufacturing and/or using PFAS, including at least 3M and DuPont, indicated that at least one such PFAS, PFOA, had caused a triad of tumors (Leydig cell (testicular), liver, and pancreatic) in a second chronic cancer study in rats.

188. By at least the end of the 1990s, the precise mechanism(s) of action by which any PFAS caused each of the tumors found in animal studies had still not been identified, mandating that Defendants continue to presume that any such PFAS that caused such tumors in animal studies could present a potential cancer risk to exposed humans.

189. By at least 2010, additional research and testing performed by Defendants manufacturing and/or using PFAS, including at least 3M and DuPont, revealed multiple potential adverse health impacts among workers exposed to such PFAS, including at least PFOA, such as

increased cancer incidence, hormone changes, lipid changes, and thyroid and liver impacts.

190. When the United States Environmental Protection Agency ("USEPA") and other state and local public health agencies and officials first began learning of PFAS exposure in the United States and potential associated adverse health effects, Defendants repeatedly assured and represented to such entities and the public that such exposure presented no risk of harm and were of no significance.

191. After the USEPA and other entities began asking Defendants to stop manufacturing and/or using certain PFAS, Defendants began manufacturing and/or using and/or began making and/or using more of certain other and/or "new" PFAS, including PFAS materials with six or fewer carbons, such as GenX (collectively, "Short-Chain PFAS").

192. Defendants manufacturing and/or using Short-Chain PFAS, including at least DuPont and 3M, are aware that one or more such Short-Chain PFAS materials also have been found in human blood.

193. By at least the mid-2010s, Defendants, including at least DuPont and Chemours, were aware that at least one Short-Chain PFAS had been found to cause the same triad of tumors (Leydig (testicular), liver, and pancreatic) in a chronic rat cancer study as had been found in a chronic rat cancer study with a non-Short-Chain PFAS.

194. Research and testing performed by and/or on behalf of Defendants making and/or using Short-Chain PFAS indicates that such Short-Chain PFAS materials present the same, similar, and/or additional risks to human health as had been found in research on other PFAS materials, including cancer risk.

195. Nevertheless, Defendants repeatedly assured and represented to governmental entities and the public (and continue to do so) that the presence of PFAS, including Short-Chain

PFAS, in human blood at the levels found within the United States present no risk of harm and is of no legal, toxicological, or medical significance of any kind.

196. At all relevant times, Defendants, individually and/or collectively, possessed the resources and ability but have intentionally, purposefully, recklessly, and/or negligently chosen not to fund or sponsor any study, investigation, testing, and/or other research of any kind of the nature that Defendants claim is necessary to confirm and/or prove that the presence of any one and/or combination of PFAS in human blood causes any disease and/or adverse health impact of any kind in humans, presents any risk of harm to humans, and/or is of any legal, toxicological, or medical significance to humans, according to standards Defendants deem acceptable.

197. Even after an independent science panel, known as the "C8 Science Panel," publicly announced in the 2010s that human exposure to 0.05 parts per billion or more of one PFAS, PFOA, had "probable links" with certain human diseases, including kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, preeclampsia, and medically-diagnosed high cholesterol, Defendants repeatedly assured and represented to governmental entities, their customers, and the public (and continue to do so) that the presence of PFAS in human blood at the levels found within the United States presents no risk of harm and is of no legal, toxicological, or medical significance of any kind, and have represented to and assured such governmental entities, their customers, and the public (and continue to do so) that the work of the independent C8 Science Panel was inadequate.

198. At all relevant times, Defendants shared and/or should have shared among themselves all relevant information relating to the presence, biopersistence, and bioaccumulation of PFAS in human blood and associated toxicological, epidemiological, and/or other adverse effects and/or risks.

199. As of the present date, blood serum testing and analysis by Defendants, independent scientific researchers, and/or government entities has confirmed that PFAS materials are clinically demonstrably present in approximately 99% of the current population of the United States.

200. There is no naturally-occurring "background," normal, and/or acceptable level or rate of any PFAS in human blood, as all PFAS detected and/or present in human blood is present and/or detectable in such blood as a direct and proximate result of the acts and/or omissions of Defendants.

201. At all relevant times, Defendants, through their acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or risks associated therewith, effectively preventing Plaintiff from discovering the existence and extent of any injuries/harm as alleged herein.

202. At all relevant times, Defendants, through their acts and/or omissions, took steps to attack, challenge, discredit, and/or otherwise undermine any scientific studies, findings, statements, and/or other information that proposed, alleged, suggested, or even implied any potential adverse health effects or risks and/or any other fact of any legal, toxicological, or medical significance associated with the presence of PFAS in human blood.

203. At all relevant times, Defendants, through their acts and/or omissions, concealed and/or withheld information from their customers, governmental entities, and the public that would have properly and fully alerted Plaintiff to the legal, toxicological, medical, or other significance and/or risk from having any PFAS material in Plaintiff's blood.

204. At all relevant times, Defendants encouraged the continued and even further increased use of PFAS by their customers and others, including but not limited to the manufacture, use, and release, of AFFF containing PFAS and/or emergency responder protection gear or equipment coated with materials made with or containing PFAS, and tried to encourage and foster the increased and further use of PFAS in connection with as many products/uses/and applications as possible, despite knowledge of the toxicity, persistence, and bioaccumulation concerns associated with such activities.

205. To this day, Defendants deny that the presence of any PFAS in human blood, at any level, is an injury or presents any harm or risk of harm of any kind, or is otherwise of any legal, toxicological, or medical significance.

206. To this day, Defendants deny that any scientific study, research, testing, or other work of any kind has been performed that is sufficient to suggest to the public that the presence of any PFAS material in human blood, at any level, is of any legal, toxicological, medical, or other significance.

207. Defendants, to this day, affirmatively assert and represent to governmental entities, their customers, and the public that there is no evidence that any of the PFAS found in human blood across the United States causes any health impacts or is sufficient to generate an increased risk of future disease sufficient to warrant diagnostic medical testing, often referring to existing studies or data as including too few participants or too few cases or incidents of disease to draw any scientifically credible or statistically significant conclusions.

208. The non-cancer health effects of PFOS are the same as PFOA.

209. By at least the end of the 1960s, additional research and testing performed by 3M and DuPont Chemical Solutions Enterprise indicated that such materials, including at least PFOA,

because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

210. Early studies showed that PFC's accumulated in the human body and were "toxic." 3M studies from the 1970s concluded that PFC's were "even more toxic" than previously believed.

211. In 1976, 3M found PFOA was persistent in the blood of its workers. This should have alerted 3M to the same issue raised by findings regarding PFOS in the prior year. 3M communicated its findings to DuPont Chemical Solutions Enterprise, but not to industry regulatory agencies.

212. Upon information and belief, by the 1970's, 3M and DuPont Chemical Solutions Enterprise knew that their PFC's (PFOA and PFOS) were widely present in the blood of the general U.S. population and would accumulate and build up in the blood/body of the exposed individuals with each additional exposure.

213. Upon information and belief, 3M and DuPont Chemical Solutions Enterprise concealed this knowledge from the public and government regulators.

214. In or about 1977, Tyco/Ansul was also aware of the environmental and toxic concerns of its AFFF and undertook a study and investigation on more environmentally improved AFFF.

215. By at least the end of the 1980s, additional research and testing performed by Defendants manufacturing and/or using PFAS materials, including at least 3M and DuPont Chemical Solutions Enterprise, indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been observed among workers exposed to such materials, including at least PFOA, but such data was not

published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

216. PFAS are readily absorbed after consumption, inhalation or dermal absorption, and it accumulates primarily in the blood stream, kidney, and liver.

217. The chemical structure of PFAS makes them resistant to breakdown or environmental degradation. As a result, they are persistent when released into the environment. In 2005, the U.S. Department of Health and Human Services found that "human exposure to PFOA and PFOS lead to the buildup of these chemicals in the body."

218. Because of its toxicity, eight major PFOA manufacturers agreed in 2006 to participate in the EPA's PFOA Stewardship Program. The participating companies made voluntary commitments to reduce product content and facility emissions of PFOA and related chemicals by 95%, no later than 2010.

219. In the May 2015 "Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS's)," scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.[297]

220. On May 25, 2016, the EPA released a lifetime health advisory (HAs) and health effects support documents for PFOS and PFOA.[298] The EPA developed the HAs to assist

[297] Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly- and perfluoroalkyl substances (PFASs). Environ Health Perspect 123:A107–A111; http://dx.doi.org/10.1289/ehp.1509934.

[298] *See* Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health

governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAs identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 parts per trillion (ppt). The HAs were based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations exposed to PFOSs. These studies indicate that exposure to PFOS and PFOA over these levels may result in adverse health effects, including:

a. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);

b. Cancer (testicular and kidney);

c. Liver effects (tissue damage);

d. Immune effects (e.g., antibody production and immunity); and/or

e. Thyroid disease and other effects (e.g., cholesterol changes).

221. Many states, however, have issued lower regulatory limits. For example, Vermont has set a combined level of 20 ppt for PFOA and PFOS and New Jersey has set a maximum contaminant level ("MCL") of 14 ppt for PFOA.

222. In addition, PFOS and PFOA are hazardous materials because they pose a "present or potential threat to human health."[299]

223. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule ("UCMR3"), requiring public water systems nationwide to monitor for thirty

Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate.

[299] *Id*; *see also, National Ass'n for Surface Finishing v. EPA*, 795 F.3d 1, 3, 6 (D.C. Cir. 2015) (referring to PFOS as a "toxic compound" and a "hazardous chemical.").

contaminants of concern between 2013 and 2015. PFOS and PFOA are such contaminants.[300]

224. In 2016, the National Toxicology Program of the United States Department of Health and Human Services ("NTP") and the International Agency for Research on Cancer ("IARC") both released extensive analyses of the expanding body of research regarding the adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are "presumed to be an immune hazard to humans" based on a "consistent pattern of findings" of adverse immune effects in human (epidemiology) studies and "high confidence" that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.[301]

225. The IARC concluded that there is "evidence" of "the carcinogenicity of . . . PFOA" in humans and in experimental animals, meaning that "[a] positive association has been observed between exposure to the agent and cancer for which a causal interpretation is . . . credible."[302]

226. California has listed PFOA and PFOS on its Proposition 65 list as a chemical known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.

227. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included $42 Million to remediate PFC contamination from military bases, as well as devoting $7 Million toward the Investing in Testing

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[300] *See Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems*, 77 Fed. Reg: 26072 (May 2, 2012).
[301] *See* U.S. Dep't of Health and Human Services, Nat'l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate* (Sept. 2016), at 1, 17, 19, https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf.
[302] *See* Int'l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf.

Act, which authorizes the Center for Disease Control and Prevention ("CDC") to conduct a study into the long-term health effects of PFOA and PFOS exposure.

228. In June 2018, the Agency for Toxic Substances and Disease Registry ("ATSDR") and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.

229. On June 15, 2022, the EPA released four drinking water health advisories for PFAS (that replace those that the EPA issued in 2016):[303]

a. Interim updated health advisory for PFOA = .004 ppt

b. Interim updated health advisory for PFOS = .02 ppt

c. Final health advisory for GenX chemicals = 10 ppt

d. Final health advisory for PFBS = 2,000 ppt

230. On September 6, 2022, the EPA published a notice of proposed rulemaking seeking public comment on its plan to designate PFOS and PFOA as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA").[304]

231. On March 14, 2023, the EPA announced the proposed National Primary Drinking Water Regulation ("NPDWR") for six PFAS (PFOS, PFOA, PFHxS, GenX chemicals, PFNA, AND PFBS).[305] The NPDWR set a proposed MCL at 4.0 ppt.[306] The EPA anticipates finalizing

[303] *See* "Technical Fact Sheet: Drinking Water Health Advisories for Four PFAS (PFOA, PFOS, GenX chemicals, and PFBS)," EPA 822-F-22-002, available at https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan (last visited June 16, 2023).
[304] *See* Designation of Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) as CERCLA Hazardous Substances, 87 Fed. Reg. 54415 (Sept. 6, 2022).
[305] EPA, National Primary Drinking Water Regulations, *available at* https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulation-table (last visited June 16, 2023).
[306] *Id*.

the regulation by the end of 2023.[307]

232. In addition to establishing an MCL, the aforementioned EPA proposed regulation will require water systems in the United States to monitor for the six PFAS quarterly, notify the public if monitoring detects PFAS at levels above the MCL, and, if above the MCL, take action to reduce PFAS levels in drinking water (e.g., utilize treatment options or switch to an alternative water supply that is below the MCL).[308]

233. Once PFOA and PFOS are free in the environment, these chemicals do not hydrolyze, photolyze, or biodegrade under typical environmental conditions and are extremely persistent in the environment. Because of their persistence, they are widely distributed throughout soil, air, and groundwater.

234. Human studies show associations between increased PFOA levels in blood and an increased risk of several health conditions, including high cholesterol levels, changes in thyroid hormone, ulcerative colitis (autoimmune disease), pre-eclampsia (a complication of pregnancy that includes high blood pressure), and kidney and testicular cancer.

235. These injuries can arise months or years after exposure to PFOA.

236. According to the EPA's Lifetime HAs, the adverse health effects observed following exposure to PFOS are the same as those observed with PFOA, meaning injuries associated with PFOS exposure and accumulation similarly manifest themselves months or years after initial exposure.

237. Due to the extreme persistence of PFAS in the environment, these chemicals' toxicity, mobility, and bioaccumulation potentially pose ongoing and probable adverse effects to

[307] *Id.*
[308] *Id.*

human health and the environment.

238. Due to the chemicals' persistent nature, among other things, these chemicals have, and continue to cause injury and damage to Plaintiff.

4. Defendants' Knowledge of the Threats to Public Health and the Environment Posed by PFAS and PFOA

239. Old Dupont had been studying the potential toxicity of PFOA since at least the 1960s and knew it was contaminating drinking water drawn from the Ohio River and did not disclose to the public or to government regulators what they knew about the substance's potential effects on humans, animals, or the environment.[309]

240. On information and belief, by at least the 1970s Defendants knew or should have known, among other things, that (a) PFOA and PFOS are toxic; and (b) when sprayed in the open environment per the instructions given by the manufacturer, PFOA, PFOS and other PFAS are mobile and persistent, readily migrate through the subsurface, mix easily with ground water, resist natural degradation, render drinking water unsafe and/or non-potable, and can be removed from soil and public drinking water supplies only at substantial expense.

241. Upon information and belief, Defendants concealed from the public and government agencies their knowledge of the risk of harm posed by PFAS.

242. In 1975, Defendant 3M concluded that PFOS was present in the blood of the general population. Since PFOA and PFOS are not naturally occurring, this finding should have alerted 3M and the other Defendant manufacturers to the possibility that their products were a source of this PFOS. The finding also should have alerted 3M to the possibility that PFOS might be mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics could explain

[309] *See*, *e.g.,* Fred Biddle, "DuPont confronted over chemical's safety," *Wilmington News Journal* (Apr. 13, 2003). The *Wilmington News Journal* is published in Wilmington, Ohio.

the absorption of PFOS in blood from 3M's products.

243. In 1976, Defendant 3M found PFOA in the blood of its workers. This finding should have alerted 3M and the other Defendant manufacturers to the same issues raised by the findings regarding PFOS in the prior year.

244. A 1978 study by 3M showed that PFOA reduced the survival rate of fathead minnow fish eggs.

245. Other studies by 3M in 1978 showed that PFOS and PFOA are toxic to rats, and that PFOS is toxic to monkeys. In one study in 1978, all monkeys died within the first few days of being given food contaminated with PFOS.

246. Studies by 3M after the 1970s also showed adverse effects from exposure to PFOA and PFOS.

247. In a 1983 study, for example, 3M found that PFOS caused the growth of cancerous tumors in rats.

248. A study proposal by 3M in 1983 stated that the resistance to degradation of PFOS and PFOA made them "potential candidates for environmental regulations, including further testing requirements under laws such as the Toxic Substances Control Act." 3M Environmental Laboratory (EE & PC), Fate of Fluorochemicals - Phase II, at p.6 (E. A. Reiner, ed. May 20, 1983).

249. A 1997 material safety data sheet ("MSDS") for a non-AFFF product made by 3M listed its only ingredients as water, PFOA, and other per-fluoroalkyl substances and warned that the product includes "a chemical which can cause cancer." The MSDS cited "1983 and 1993 studies conducted jointly by 3M and DuPont" as support for this statement. On information and belief, 3M's MSDSs for AFFF did not provide similar warnings.

250. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that "reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment." Toxic Substances Control Act ("TSCA") § 8(e), 15 U.S.C. § 2607(e).

251. 3M did not comply with its duty under the TSCA, and in April 2006 it agreed to pay the EPA a penalty of more than $1.5 million for its failure to disclose studies regarding PFOS or PFOA and other per-fluoroalkyl substances dating back decades, among other things.

252. By December 2005, the EPA uncovered evidence that DuPont concealed the environmental and health effects of PFOA, and the EPA announced the "Largest Environmental Administrative Penalty in Agency History."[310] The EPA fined DuPont for violating the Toxic Substances Control Act "Section 8(e)—the requirement that companies report to the EPA substantial risk information about chemicals they manufacture, process or distribute in commerce."[311]

253. By July 2011, Old DuPont could no longer credibly dispute the human toxicity of PFOA, which it continued to manufacture. The "C8 Science Panel" created as part of the settlement of a class action over Old DuPont's releases from the Washington Works plant had reviewed the available scientific evidence and notified Old DuPont of a "probable link" between PFOA exposure and the serious (and potentially fatal) conditions of pregnancy-induced

[310] U.S. Envtl. Prot. Agency, Reference News Release, "EPA Settles PFOA Case Against DuPont for Largest Environmental Administrative Penalty in Agency History" (Dec. 14, 2005), *available at* https://www.epa.gov/archive/epapages/newsroom_archive/newsreleases/fdcb2f665cac66bb852570d7005d6665.html#:~:text=(Washington%2C%20D.C.%2DDec.,to%20comply%20with%20federal%20law. (last visited June 16, 2023).

[311] *Id.*

hypertension and preeclampsia.[312] By October 2012, the C8 Science Panel had notified Old DuPont of a probable link between PFOA and five other conditions—high cholesterol, kidney cancer, thyroid disease, testicular cancer, and ulcerative colitis.

254. In July 2015, Old DuPont spun off its chemicals division by creating Chemours as a new publicly-traded company, once wholly owned by Old DuPont. By mid-2015, Old DuPont had dumped its perfluorinated chemical liabilities into the lap of the new Chemours.

255. On information and belief, all Defendants knew or should have known that in its intended and/or common use, PFAS, and/or AFFF containing PFOA or PFOS would very likely injure and/or threaten public health and the environment. On information and belief, this knowledge was accessible to all Defendants. For example, in 1970 a well-established firefighting trade association was alerted to the toxic effects on fish of a chemical compound related to PFOS. On information and belief, at least the following Defendants are and/or were members of this trade association: 3M, Tyco/Ansul, Chemguard, and National Foam/Angus.

256. Additionally, on information and belief, all Defendants knew or should have known that their PFAS, and/or AFFF and/or chemical feedstocks and the PFOA and PFOS the products contained, easily dissolve in water, because the products were designed to be mixed with water; are mobile, because the products were designed to quickly form a thin film; resist degradation, because that is the nature of the products' chemical composition, and the products had long shelf-lives; and tend to bioaccumulate, because studies regarding the presence of substances with carbon-fluorine bonds in the blood of the general population were publicly available beginning in at least 1976.

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[312] *See* The C8 Science Panel, Status Report: PFOA (C8) exposure and pregnancy outcome among participants in the C8 Health Project (July 15, 2011), *available at* http://www.c8sciencepanel.org/pdfs/Status_Report_C8_and_pregnancy_outcome_15July2011.pdf (last visited June 16, 2023).

257. The Defendants failed to warn and share information with their customers regarding the danger of their products to the quality of soil and unprotected water sources.

258. Defendants' products created major waste management problems which they absolved themselves of, providing their customers with no practical guidance and instructions on how to deal with the proper disposal/destruction of the Fluorosurfactant Product, specifically PFAS, and/or AFFF, within water sources, biosolids and soil.

259. Some or all of the Defendants understood how stable the fluorinated surfactants used in their PFAS, and/or AFFF formulations are when released into the environment from the first sale to their customers, but none warned customers nor provided reasonable instruction on how to manage wastes generated from use of their products. The persistence and contaminating nature of the perfluorinated surfactant 3M made that went into its PFAS, and/or AFFF products was well understood prior to the commercial applications of these surfactants at 3M's Cottage Grove facility in Minnesota.

260. The inventor of 3M's surfactants was J. H. Simons. Simons' 1948 patent (Simons[313]) reports: PFCs are "non-corrosive, and of little chemical reactivity"; "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."

261. Simons reported that the surfactants that 3M specified for its AFFF do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the carbon skeleton of the molecule. These highly stable chemicals were developed to provide non-reactive solid and liquid chemicals with low surface tensions that could withstand high temperatures and

[313] Simons, J. H., U.S. Patent No. 2,447,717. August 24, 1948.

would not react with highly reactive materials such as oxygen (see Simons[314], Bryce[315]). 3M understood that the stability of the carbon-to-fluorine bonds and the lack of attraction for other chemical species prevent these surfactants from undergoing further chemical reactions or degrading under natural processes in the environment (see Simons 1950 published work[316]).

262. Bryce, an employee of 3M, published an authoritative treatise stating "[t]his chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon." (Bryce (1964)).

263. The thermal stability of 3M's surfactants was understood prior to commercial production. In 1947, two researchers reported that fluorocarbon compounds did not degrade at temperatures as high as 500º C (932ºF), even in the presence of catalytic materials (Grosse, et al.[317]). Simons' patent application further discloses that the chemicals he invented were thermally stable at temperatures up to 750° C (1382º F) (*see* Simons (1948); Simons et al., (1949)). These chemicals are non-reactive and thermally stable due to the strength and stability of the carbon-to-fluorine bonds (Simons (1949); Bryce (1950)[318]). Additional research by 3M expanded the understanding of the thermal stability of perfluorocarbon compounds. Bryce explained that the fracture of the carbon-to-carbon bonds may take place at very high temperatures from 600 to 1000º C (1112 to 1832º F) depending on the carbon chain length. He

[314] Simons, J. H., 1949. Fluorocarbons. Scientific American, Inc., 181(5): 44-47.
[315] Bryce, H. G., 1964. Industrial and Utilitarian Aspects of Fluorine Chemistry. Fluorine Chemistry. 5(4): 295-498.
[316] Simons, J. H., 1950. Fluorocarbons and Their Production. Fluorine Chemistry, 1(12): 401-422.
[317] Grosse, A. V., et al., 1947. Properties of Fluorocarbons. Industrial and Engineering Chemistry, 39(3): 367-374. March.
[318] Bryce, T. J., 1950. Fluorocarbons - Their Properties and Wartime Development. Fluorine Chemistry, 1(13): 423-462.

also reported that the carbon-to-fluorine bond is much stronger and can require temperatures of 1200° C (2192º F) to break (Bryce, 1964).

264. Nowhere in any Material Safety Data Sheet for any of the Defendants' products is information on the thermal stability of their surfactants disclosed. Failure to disclose knowledge of how stable the chemical ingredients in the PFAS, and/or AFFF product are to customers is a failure to warn just how indestructible the surfactant ingredients are when released to unprotected water sources. The remarkable thermal stability of the surfactants used in Defendants' formulations means that there is a risk the customer has to deal with because the surfactant ingredients are incredibly stable. The surfactant additive is so stable that it is indestructible under normal use and environmental conditions; facts which are known by PFAS, and/or AFFF chemical feedstock manufacturers and not apparent to the users of these products.

265. Defendant 3M was capable of producing a variety of perfluorinated products at its Cottage Grove facility (PFOS, PFOA, and PFBA, in addition to the salts of PFOS, PFOA, and PFBA). All of these surfactants were understood by 3M to readily dissolve in water. In 1962, testing of PFOS-based surfactants indicated that these compounds were very soluble (Guenthner, et al.[319]). Numerous PFCs manufactured by 3M, including fluorocarbon carboxylic acids and fluorocarbon sulfonic acids such as PFOA and PFOS readily dissolve when mixed with water (Bryce (1964)). 3M knew by 1964 that when dissolved, fluorocarbon carboxylic acids and fluorocarbon sulfonic acids dissociated to form highly stable perfluorocarboxylate and perfluorosulfonate ions (Bryce (1964)). Later studies by 3M on the adsorption and mobility of FC-95 and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very

[319] Guenthner, R. A., et al., 1962. Surface Active Materials From Perfluorocarboxylic and Perfluorosulfonic Acids, 1(3): 165-168.

high mobility in soils for both compounds.[320]

266. Defendant 3M understood from the earliest days it acquired the Simons' patents that the surfactants it commercialized had extremely limited reactivity and that the high thermal stability of the perfluorinated carbon chain inhibited degradation in the environment (Bryce, 1950). The breaking of a carbon-to-fluorine bond requires the input of large amounts of energy to overcome the chemical bond between carbon and fluorine. Chemical and physical processes occurring in nature lack sufficient energy to break carbon-to-fluorine bonds and without this input of energy, the carbon-to-fluorine bonds remain intact.

267. Bryce wrote, "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon" (Bryce, 1964). 3M understood the chemical stability of the carbon-to-fluorine bond; it knew that its surfactants were immune to chemical and biological degradation in soils and ground water.

268. A 1971 internal memo by H.G. Bryce states that "the thesis that there is 'no natural sink' for fluorocarbons obviously demands some attention." Hence, 3M understood at the very least that when its AFFF product was released to the environment, it would essentially never degrade.[321]

269. In natural environments, the surfactants do not undergo degradation of the carbon-to-fluorine bonds of the perfluorinated carbon chain. The non-fluorinated, functional group of the chemical will partially degrade, yielding recalcitrant products such as PFOS, PFOA, and PFBA, which then resist further degradation. Basic weathering and degradation reactions,

[320] 3M, 1978 [3MA10036129].
[321] 3M, 1971 [3MA02496587].

such as hydrolysis, occur at the non-fluorinated, functional group end of the molecule, producing the original fluorocarbon compound (Pearlson[322]). Depending on the surfactant these reduce to PFOS, PFOA, or PFBA.

270. Defendant 3M knew that the perfluorinated components in its AFFF product(s) when released to the environment would not degrade the perfluorinated carbon structure, but would remain intact and persist (Bryce, 1950). Nearly 30 years later and after the establishment of a robust market of AFFFs using such ingredients, Defendant 3M finally got around to looking at the environmental risks its products pose. A 1979 3M study reports on its surfactant FC95, citing multiple studies on toxicity and biodegradability. [323] The study reports that "F-95 was found to be completely resistant to biological test conditions… it appears that waterways are the environmental sink for FC95… ."[324]

271. A 1978 3M biodegradation study reports "… the results of the quite extensive study strongly suggests that FM3422 is likely to persist in the environment for extended period unaltered by metabolic attack." [325]

272. 3M and other Defendants chose not to disclose their knowledge of the inability of their surfactants to break down in the natural environment. They failed to warn that their products can contaminate drinking water sources for many decades despite their knowledge that this was a likely outcome from the use of their products.

273. All of the Defendants are sophisticated and knowledgeable in the art and science of formulating AFFF products and/or chemical feedstocks. They understood far more about the

[322] Pearlson, W. H., 1950. Fluorocarbon Derivatives. Fluorine Chemistry, 1(14): 463-522.
[323] 3MA10066577.
[324] *Id*.
[325] 3MA00717615.

properties of and the biodegradability of their additives than any customer. They chose not to use their knowledge to design safer products. *See* Ansul[326] which wrote the following about the biodegradation of AFFF: Biodegradation is a "measure of how completely a substance breaks down in the environment. The biodegradability of a chemical is expressed as a percentage determined by dividing the BOD by the COD and multiplying by 100. The chemical oxygen demand, COD, is the amount of oxygen needed to completely break a chemical down to its most oxidized state (for example: CO2, H2O, and HF) and is a measured analytical value. The biochemical oxygen demand, BOD, is an empirical test that measures a relative oxygen requirement. This test measures the oxygen required for the biochemical degradation of organic and inorganic material… For firefighting foams, this test is conducted for 20 days as opposed to the usual five days for other chemicals because the bacteria require a longer time to acclimate to the test solution of the foam… [b]iodegradation is the percentage ratio of BOD/COD. If that resulting number is higher than 50%, the chemical is determined to be readily biodegradable. If it is below 15%, the chemical is determined to be not biodegradable. Ansul summarized its explanation by noting: If BOD/COD > 50%, then biodegradable; If BOD/COD < 15%, then NOT biodegradable.

274. The information that Ansul published and widely distributes to its customers is both misleading and deceitful. Ansul's explanation ignores the fact that while the foam stabilizer additives biodegrade, perfluorinated surfactants do not. Dimitrov, et al.[327] report that PFAS when present in the environment does not undergo any further chemical, microbial or photolytic degradation or breakdown. Long before Dimitrov, 3M understood this as shown by its

[326] Ansul Inc., Environmental Aspects of AFFF and AR-AFFF, White Paper 1017, 2003.
[327] *Id*., Dimitrov, S., et al. 2004.

explanation of biodegradability in a 1976 study, noting that hydrocarbon components of a perfluorinated admixture will degrade leaving behind the perfluorinated components which do not biodegrade.[328] Once these substances undergo biotic or abiotic degradation, the perfluorinated moiety that remains will be PFOS. The rate of degradation to PFOS is not considered significant and over time these substances are all expected to degrade in the environment to environmentally persistent PFOS. These were facts that were known by 3M in the 1960s. These were facts that other PFAS, and/or AFFF chemical feedstock manufacturers knew or should have known; and if they didn't then they simply created their products blindly and without concern as to whether they could cause harm to unprotected water resources and place communities at risk.

275. Defendant 3M, along with Defendant Ansul and others, had intimate understanding of the poor biodegradation of their fluorochemical compounds. A 1976 study, for example, observed no biodegradation of FC-95, the potassium salt of PFOS. 3M characterized the result of the study "unsurprising" in light of the fact that "[b]iodegradation of FC 95 is improbable because it is completely fluorinated".[329]

276. The Ansul Company (Tyco), published a report in 1977 titled "Environmentally Improved AFFF."[330] This report acknowledges that AFFFs were understood to be environmentally damaging and could pose potential negative impacts to water quality. Ansul wrote: "The purpose of this work is to explore the development of experimental AFFF formulations that would exhibit reduced impact on the environment while retaining certain fire suppression characteristic…improvements [to AFFF formulations] are desired in the

[328] 3MA01252037.
[329] 3M, 1976 [3MA01252037].
[330] Ansul Co., Final Report: Environmentally Improved AFFF, N00173-76-C-0295, Marinette, WI, Dec. 13, 1977.

environmental area, i.e., development of compositions that have a reduced impact on the environment without loss of fire suppression effectiveness."[331] Its study showed it had the ability to reformulate its AFFF products to be biodegradable, but there is no evidence that any company bothered to do so.

277. Also, in 1979 Defendant 3M carried out a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.[332] More than 10 years after 3M began selling its AFFF products it wrote "there has been a general lack of knowledge relative to the environmental impact of these chemicals," and ominously disclosed, "[i]f these materials are not biodegradable, what is their fate in the environment?"[333]

278. Defendants failed to comply with their obligations to notify EPA about the "substantial risk of injury to health or the environment" posed by their AFFF products containing PFOS/A. See TSCA § 8(e).

279. In 1980, 3M published data in peer- reviewed literature showing that humans retain PFOS in their bodies for years. Based on that data, 3M estimated that it could take a person up to 1.5 years to clear just half of the accumulated PFOS from their body after all exposures had ceased.

280. By the early 1980s, the industry suspected a correlation between PFOS exposure and human health effects. Specifically, manufacturers observed bioaccumulation of PFOS in workers' bodies and birth defects in children of workers.

281. In 1981, DuPont tested for and found PFOA in the blood of female plant workers in Parkersburg, West Virginia. DuPont observed and documented pregnancy outcomes in

[331] *Id.*
[332] 3MA00326828.
[333] *Id.*

exposed workers, finding two of seven children born to female plant workers between 1979 and 1981 had birth defects—one an "unconfirmed" eye and tear duct defect, and one a nostril and eye defect.

282. Beginning in 1983, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers. In an internal memo, 3M's medical officer warned "we must view this present trend with serious concern. It is certainly possible that … exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body."

283. Based on information and belief, in 2000, under pressure from the EPA, 3M announced that it was phasing out PFOS and U.S. production of PFOS; 3M's PFOS-based AFFF production did not fully phase out until 2002.

284. Defendants also knew or reasonably should have known that PFOA and PFOS could be absorbed into the lungs and gastrointestinal tract, potentially causing severe damage to the liver, kidneys, and central nervous system, in addition to other toxic effects, and that PFOA and PFOS are known carcinogens which cause genetic damage.

285. Notwithstanding this knowledge, Defendants negligently and carelessly: (1) designed, manufactured, marketed, distributed, and/or sold fluorochemical products; (2) failed to issue reasonable instructions on how fluorochemical products should be used and disposed of in AFFF; (3) failed to recall and/or warn the users of fluorochemical products, negligently designed products containing or degrading into PFOA and/or PFOS, of the dangers of surface water, soil, and groundwater contamination as a result of standard use and disposal of these products; and (4) further failed and refused to issue the appropriate warnings and/or recalls to the users of fluorochemical products, notwithstanding the fact that Defendants knew the foreseeable identities of the purchasers and end-users of the fluorochemical products, as well as its final fate in water,

biota, and humans.

5. Old Dupont's Fraudulent Plans to Shield its Assets From its PFAS Liabilities

286. By 2013, Old DuPont faced mounting liabilities arising out of its long-running manufacture, use, marketing, distribution, and sale of PFOA and/or its chemical precursors throughout the country. These liabilities included, among other things, clean-up costs, including proper disposal/destruction of the compounds, remediation obligations, tort damages, natural resources damages, and potential punitive damages.

287. Upon information and belief, by 2013, in order to shield its assets from these liabilities and make itself a more appealing merger partner, Old DuPont began to consider and/or engage in a complex series of corporate restructurings and spin-offs.

288. In or around 2014, Old DuPont formed The Chemours Company as a wholly owned and operated subsidiary. Shortly thereafter, Old DuPont transferred its "Performance Chemicals" business (which included Teflon® and other products, the manufacture of which involved the use of PFOA and other PFAS) to Chemours.

289. At the time of the transfer of its Performance Chemicals business to Chemours, Old DuPont had been sued, threatened with suit, and/or had knowledge of the likelihood of litigation to be filed regarding Old DuPont's liabilities for damages and injuries arising from its manufacture and sale of its PFAS products, including PFOA and its chemical precursors.

290. Upon information and belief, prior to the spinoff, Chemours was a wholly owned subsidiary of Old DuPont and its four-member Board of Directors consisted of three Old DuPont employees and a former member of Old DuPont's Board of Directors. Then, effective immediately prior to the spinoff, the Chemours Board of Directors doubled in size, the three Old DuPont employees resigned, and seven new members were appointed to fill the vacancies. This new Chemours Board of Directors did not take part in negotiating the Separation Agreement.

291. In or around July 1, 2015, Old DuPont completed the spin-off of Chemours as a separate public entity and saddled Chemours with Old DuPont's massive PFAS liabilities.

292. Although many of the details of the Separation Agreement remain largely hidden from the public, upon information and belief, as part of the Separation Agreement, Chemours accepted broad assumption of Old DuPont's environmental liabilities arising out of its long-running manufacture, use, discharge, marketing, distribution, and sale of PFAS.

293. Additionally, Chemours agreed to assume for itself and indemnify Old DuPont against all liabilities relating to or arising from the operation of the Performance Chemicals business at any time and regardless of which entity is named in any action or against whom such liabilities are asserted or determined.

294. Further, Chemours agreed to assume for itself and indemnify Old DuPont from all environmental liabilities that arose prior to the spinoff if Old DuPont reasonably determined that 50.1% of the liabilities were attributable to the Performance Chemicals business.

295. Upon information and belief, the value of the assets Chemours transferred to Old DuPont was substantially more than the value of the assets it received from Old DuPont, and Chemours assumed billions of dollars of Old DuPont's PFAS and other liabilities.

296. Old DuPont knew that Chemours was undercapitalized and unable to satisfy the massive liabilities that it assumed from Old DuPont. In addition to the assumption of such liabilities, Chemours was required to provide broad indemnification to Old DuPont in connection with these liabilities, which is uncapped and does not have a survival period.

297. In or around December 2015, Old DuPont entered into an agreement with Dow, Inc. ("Old Dow") pursuant to which Old DuPont and Old Dow merged with subsidiaries of a newly formed holding company, DowDuPont, Inc. ("DowDuPont"), which was created solely for

the purpose of effectuating the merger. Old DuPont and Old Dow became subsidiaries of DowDuPont.

298. Following its creation, DowDuPont engaged in a number of realignments and divestitures, the details of which remain largely hidden from Plaintiff and other creditors, intended to frustrate and/or hinder creditors with claims against Old DuPont. Upon information and belief, the net effect of these transactions was the transfer, directly or indirectly, of a substantial portion of Old DuPont's assets to DowDuPont for far less than these assets were worth.

299. By 2019, DowDuPont spun-off two new publicly traded companies, Corteva, Inc. and Dow, Inc. ("New Dow"). DowDuPont was then renamed DuPont de Nemours, Inc. ("New DuPont").

300. Upon information and belief, Corteva currently holds Old DuPont as a subsidiary.

301. Upon information and belief, as part of the DowDuPont Separation Agreement, Corteva and New DuPont also assumed direct financial liability of Old DuPont that was not related to the Agriculture, Material Science, or Specialty Products Businesses, including the PFAS liabilities which are allocated on a pro rata basis between Corteva and New DuPont.

6. Plaintiff's Exposure To AFFF

302. Upon information and belief, the United States Army has stored and used Defendants' AFFF containing PFOA and/or PFOS chemicals and/or their precursor chemicals in firefighter training and response exercises, including at the following facilities: San Diego NTC, CA, Great Lakes NAS, IL, San Diego NAS, CA, Long Beach NSY, CA, and Bremerton NSY, WA.

303. Defendants' designed, manufactured, marketed, distributed, and/or sold the AFFF containing PFOA and/or PFOS chemicals and/or their precursor chemicals to the United

States Navy.

304. The descriptive labels and material safety data sheets for Defendants' AFFF containing PFOA or PFOS and/or their precursor chemicals utilized by firefighters with the United States Navy did not reasonably or adequately describe the AFFF's risks to human health.

305. The Defendants knew or should have known of the hazards of AFFF containing PFOA and/or PFOS and/or their precursor chemicals when the products were manufactured.

306. From 1980 to 1986, Plaintiff served in the United States Navy, during which time he was stationed at San Diego NTC, CA, Great Lakes NAS, IL, San Diego NAS, CA, Long Beach NSY, CA, and Bremerton NSY, WA.

307. The Plaintiff directly used, was exposed, and/or was given AFFF in training and during Plaintiff's military service with the United States Navy.

308. The Plaintiff was never informed that this product was inherently dangerous. Nor was the Plaintiff warned about the known health risks associated with this product.

309. The Plaintiff never received or was told to use any protective gear to guard against the known dangerous propensities of this product.

310. Defendants were and/or should have been aware, knew and/or should have known, and/or foresaw or should have foreseen that their design, marketing, development, manufacture, distribution, release, training and response of users, production of instructional materials, sale and/or other handling and/or use of AFFF containing PFAS would result in the contamination of the blood and/or body of Plaintiff with PFAS, and the biopersistence and bioaccumulation of such PFAS in the blood and/or body.

311. Defendants were and/or should have been aware, or knew and/or should have known, and/or foresaw or should have foreseen that allowing PFAS to contaminate the blood

and/or body of Plaintiff would cause injury, irreparable harm, and/or unacceptable risk of such injury and/or irreparable harm to Plaintiff.

312. Defendants did not seek or obtain permission or consent from Plaintiff before engaging in such acts and/or omissions that caused, allowed, and/or otherwise resulted in Plaintiff's exposure to AFFF and the contamination of Plaintiff's blood and/or body with PFAS materials, and resulting biopersistence and bioaccumulation of such PFAS in his blood and/or body.

313. Throughout the duration of Plaintiff's military service, Plaintiff used and was exposed to Defendants' AFFF products.

314. During Plaintiff's use of Defendants' AFFF containing PFOA and/or PFOS and/or their precursor chemicals, the PFOA and/or PFOS and/or their precursor chemicals entered Plaintiff's body.

315. At no point during Plaintiff's trainings or career did Plaintiff receive any warning that Defendants' AFFF containing PFOA and/or PFOS and/or their precursor chemicals was toxic or carcinogenic.

316. Throughout the duration of Plaintiff's military service, Plaintiff ingested drinking water contaminated with Defendants' AFFF and AFFF-related fluorochemical products.

317. In or around 1/1/2023, Plaintiff's doctors diagnosed him with Kidney Cancer.

318. Plaintiff subsequently underwent radiation therapy to treat his cancer.

319. On or around October 1, 2023, Plaintiff discovered that his cancers were caused by exposure to Defendants' AFFF and AFFF-related fluorochemical products.

320. Plaintiff suffered, and continues to suffer, the effects of his illness proximately caused by exposure to Defendants' fluorochemical products.

CAUSES OF ACTION

First Cause of Action
(Products Liability – Defective Design – Consumer Expectations)

321. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this complaint as if restated in full therein.

322. At all times relevant to the Complaint, Defendants were regularly engaged in the design, formulation, production, creation, making, construction, assembly, rebuilding, sale, distribution, preparation, and labeling, of fluorochemical products.

323. At all times pertinent to this Complaint, Defendants regularly participated in placing the fluorochemical products into the American stream of commerce.

324. As manufacturers, designers, refiners, formulators, distributors, suppliers, sellers, and/or marketers of fluorochemical products, Defendants owed a duty to all persons whom Defendants' products might foreseeably harm, including Plaintiff, not to manufacture, sell, and/or market any product which is unreasonably dangerous for its intended and foreseeable uses.

325. Plaintiff used Defendants' fluorochemical products in a reasonably foreseeable manner and without substantial changes in the condition in which the products were sold.

326. Defendants' fluorochemical products used by Plaintiff did not perform as safely as an ordinary consumer would have expected the products to perform when used as Plaintiff did in an intended or reasonably foreseeable manner because PFOA and PFOS are carcinogens and otherwise harmful to human health.

327. Defendants' defective design of the fluorochemical products was far more dangerous than Plaintiff or an ordinary consumer would expect when used, as Plaintiff did, in an intended and reasonably foreseeable manner.

328. Defendants' fluorochemical products' failure to perform safely was a substantial

factor in causing Plaintiff's harm.

329. Defendants could have manufactured, marketed, and sold alternative designs or formulations of products that did not contain harmful fluorochemicals.

330. These alternative designs and/or formulations were available, practical, and technologically feasible.

331. The use of these alternative designs would have reduced or prevented the reasonably foreseeable harm to human health that was caused by Defendants' manufacture, marketing, and/or sale of fluorochemical products.

332. The risks of fluorochemical products were not obvious to users of the AFFF, nor were they obvious to users in the vicinity of the AFFF use, including Plaintiff, who were unwittingly exposed to Defendants' toxic and carcinogenic chemicals. Plaintiffs could not have reasonably discovered the defects and risks associated with the use of fluorochemical products and could not protect themselves from exposure to Defendants' fluorochemical products.

333. The risks of fluorochemical products were not obvious to users of the AFFF, nor were they obvious to users in the vicinity of the AFFF use, including Plaintiff, who were unwittingly exposed to Defendants' toxic and carcinogenic chemicals. Plaintiff could not have reasonably discovered the defects and risks associated with the use of fluorochemical products and could not be protected from exposure to Defendants' fluorochemical products.

334. As a direct and proximate result of Defendants' defective design, Plaintiff has suffered and will continue to suffer some or all of the following damages:

a. Medical and hospital bills for diagnosis, monitoring, and treatment of injuries;

b. Physical injury, both temporary and permanent;

c. Economic damages;

d. Severe and significant emotional distress and mental pain and suffering;

e. Humiliation, embarrassment and fear;

f. Loss of enjoyment of life;

g. Annoyance and inconvenience; and

h. Other damages, which, under the law and circumstances, Plaintiff is entitled to recover, including attorneys' fees and costs associated with the prosecution of this action.

335. As a result of Defendants' design and formulation of a defective product, Defendants are strictly liable in damages to Plaintiff.

336. Defendants' acts were willful, wanton, reckless and/or conducted with a reckless indifference to the rights of Plaintiff.

Second Cause Of Action
(Products Liability – Defective Design – Risk Benefit)

337. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint as if restated in full therein.

338. At all times relevant to the Complaint, Defendants were regularly engaged in the design, formulation, production, creation, making, construction, assembly, rebuilding, sale, distribution, preparation, and labeling, of fluorochemical products.

339. At all times pertinent to this Complaint, Defendants regularly participated in placing the fluorochemical products into the American stream of commerce.

340. As manufacturers, designers, refiners, formulators, distributors, suppliers, sellers, and marketers of fluorochemical products, Defendants owed a duty to all persons whom Defendants' products might foreseeably harm, including Plaintiff, not to manufacture, sell, or

market any product which is unreasonably dangerous for its intended and foreseeable uses.

341. Defendants' fluorochemical products were defectively designed and manufactured when the products left the hands of Defendants, such that the foreseeable risks associated with the use, storage, and disposal of the fluorochemical products exceeded the alleged benefits associated with its design and formulation.

342. At all times relevant to this litigation, Defendants' fluorochemical products reached Defendants' intended consumers and users without substantial change in its condition as designed, manufactured, sold, distributed, labeled, and marketed by Defendants.

343. Defendants could have manufactured, marketed, and sold alternative designs or formulations of products that did not contain harmful fluorochemicals.

344. These alternative designs and/or formulations were available, practical, and technologically feasible.

345. The use of these alternative designs would have reduced or prevented the reasonably foreseeable harm to human health that was caused by the Defendants' manufacture, marketing, and sale of fluorochemical products.

346. The fluorochemical products manufactured, sold, or distributed by the Defendants were defective in design because the foreseeable risk of harm posed by the fluorochemical products could have been reduced or eliminated by the adoption of a reasonable alternative design.

347. As a direct and proximate result of Defendants' defective design, Plaintiff has suffered and will continue to suffer some or all of the following damages:

a. Medical and hospital bills for diagnosis, monitoring, and treatment of injuries;

b. Physical injury, both temporary and permanent;

c. Economic damages;

d. Severe and significant emotional distress and mental pain and suffering;

e. Humiliation, embarrassment and fear;

f. Loss of enjoyment of life;

g. Annoyance and inconvenience; and

h. Other damages, which, under the law and circumstances, Plaintiff is entitled to recover, including attorneys' fees and costs associated with the prosecution of this action.

348. As a result of Defendants' design and formulation of a defective product, Defendants are strictly liable in damages to Plaintiff.

349. Defendants' acts were willful, wanton, reckless and/or conducted with a reckless indifference to the rights of Plaintiff.

Third Cause Of Action
(Strict Products Liability – Failure To Warn)

350. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this Complaint as if restated in full therein.

351. Defendants knew or should have known that exposure to fluorochemical products presented a substantial danger when used because it is hazardous to human health and the environment.

352. Defendants knew or should have known that the manner in which they were manufacturing, marketing, and selling fluorochemical products would result in physical harm to Plaintiff.

353. Ordinary consumers of Defendants' fluorochemical products would not have

recognized the risks.

354. Defendants failed to adequately warn Plaintiff of the potential risks of fluorochemical products.

355. Adequate instructions and warnings on the fluorochemical products could have reduced or avoided these foreseeable risks of harm to Plaintiff's health.

356. Had Defendants provided adequate warnings, Plaintiff could have taken measures to avoid or lessen the exposure.

357. The lack of sufficient warnings was a substantial factor in causing Plaintiff's harm.

358. Defendants' failure to warn was a direct and proximate cause of Plaintiff's Kidney Cancer.

359. Defendants' failure to provide adequate and sufficient warnings for the fluorochemical products that they manufactured, marketed, and sold renders the fluorochemical products defective products.

360. As a direct and proximate result of Defendants' defective design, Plaintiff has suffered and will continue to suffer some or all of the following damages:

a. Medical and hospital bills for diagnosis, monitoring, and treatment of injuries;

b. Physical injury, both temporary and permanent;

c. Economic damages;

d. Severe and significant emotional distress and mental pain and suffering;

e. Humiliation, embarrassment and fear;

f. Loss of enjoyment of life;

g. Annoyance and inconvenience; and

h. Other damages, which, under the law and circumstances, Plaintiff is entitled to recover, including attorneys' fees and costs associated with the prosecution of this action.

361. As a result of Defendants' manufacture, sale, and/or distribution of a defective product, Defendants are strictly liable in damages to Plaintiff.

362. Defendants' acts were willful, wanton, reckless, and/or conducted with a reckless indifference to the rights of Plaintiff.

Fourth Cause Of Action
(Negligence)

363. Plaintiff hereby incorporates by reference the allegations contained in the preceding paragraphs of this complaint as if restated in full therein.

364. As manufacturers, refiners, formulators, distributors, suppliers, sellers, marketers, shippers, or handlers of fluorochemical products, Defendants owed a duty to Plaintiff to exercise reasonable care in the instructing, labeling, and warning of the handling, control, use and disposal of Defendants' fluorochemical products.

365. Defendants also voluntarily assumed a duty towards Plaintiff by affirmatively representing to Plaintiff that Defendants' previously detailed acts and/or omissions were not causing any physical harm or other damage to him, and that Defendants' fluorochemical products were safe to use.

366. Defendants' fluorochemical products are inherently dangerous substances and Defendants' owed a duty of care towards the Plaintiff that was commensurate with the harmful nature of the fluorochemical products and the dangers involved with exposure to fluorochemical products.

367. Defendants failed to correct, clarify, rescind, and/or qualify its representations to Plaintiff that Defendants' acts and/or omissions were not causing any physical harm and/or damage to him, or that the fluorochemical products were safe to use.

368. Despite knowing that their fluorochemical products are toxic, can contaminate soil and water resources, and present significant risks to human health and the environment, Defendants failed to use reasonable care when they: (a) designed, manufactured, formulated, handled, labeled, instructed, controlled, marketed, promoted, and/or sold fluorochemical products;(b) issued instructions on how fluorochemical products should be used and disposed of; (c) failed to recall and/or warn the users of fluorochemical products of the dangers to human health and water contamination as a result of standard use and disposal of these products; and (d) failed and refused to issue the appropriate warnings and/or recalls to the users of fluorochemical products regarding the proper use and disposal of these products, notwithstanding the fact that Defendants knew, or could determine with reasonable certainty, the identity of the purchasers of their fluorochemical products.

369. But for Defendants' negligent acts and/or omissions, Plaintiff would not have been exposed to unhealthy levels of fluorochemicals.

370. Defendants' failure to act with reasonable care to (1) design a product to perform safely; (2) failure to issue an adequate warning or instruction on the use of fluorochemical products warning and; (3) failure to issue a recall, were substantial factors in causing Plaintiff's harm.

371. Defendants knew or reasonably should have known that users would not realize the danger Defendant's fluorochemical products posed to human health.

372. A reasonable manufacturer or distributor under the same or similar circumstances

would have warned of the danger.

373. Defendants' negligent acts and omissions directly and proximately caused Plaintiff's leukemia and continue to directly and proximately cause damage to Plaintiff in the form of severe personal injuries, pain, suffering, and emotional distress.

374. Plaintiff is reasonably certain to have future permanent and lasting detrimental health effects due to Plaintiff's present and past injuries directly and proximately caused by Defendants' negligent acts or omissions.

375. It has been reasonably foreseeable to Defendants for at least several decades that Defendants' negligent acts and/or omissions would directly and proximately cause bodily injury and economic damage to Plaintiff including the injuries and damages that Plaintiff suffers from.

376. Defendants were conscious of the dangers of fluorochemical products, and its negligent acts or omissions, and were conscious that bodily injury to Plaintiff would or was likely to result from the fluorochemical products and Defendants' negligent acts and/or omissions.

377. Nevertheless, with reckless indifference to these consequences, and as previously detailed, Defendants consciously and intentionally acted negligently and/or omitted the duties Defendants knew it owed to Plaintiff, other exposed individuals, and the public at large, and Plaintiff was harmed as a result.

378. The acts and omissions of Defendants were negligent, intentional, reckless, malicious, willful and/or wanton, and as a direct and proximate result, Plaintiff has suffered and will continue to suffer some or all of the following damages:

a. Medical and hospital bills for diagnosis, monitoring, and treatment of injuries;

b. Physical injury, both temporary and permanent;

c. Economic damages;

d. Severe and significant emotional distress and mental pain and suffering;

e. Humiliation, embarrassment and fear;

f. Loss of enjoyment of life;

g. Annoyance and inconvenience; and

h. Other damages, which, under the law and circumstances, Plaintiff is entitled to recover, including attorneys' fees and costs associated with the prosecution of this action.

Fifth Cause Of Action
(Concealment Misrepresentation And Fraud)

379. Plaintiff incorporates herein by reference each and every paragraph of this Complaint as though set forth in full in this cause of action.

380. Defendants knowingly, intentionally, maliciously, willfully, wantonly, recklessly and/or negligently failed and/or refused to advise Plaintiff of the dangers and/or health risks posed by Defendants' fluorochemical products.

381. Defendants negligently, knowingly, maliciously, willfully, wantonly, recklessly, intentionally, and/or negligently withheld, misrepresented, and/or concealed information regarding Defendants' fluorochemical products from Plaintiff who had a right to know of information which would have prevented Plaintiff from being exposed and/or continuing to be exposed to the fluorochemical products.

382. For at least several decades, Defendants had knowledge or the means of knowledge that Defendants' fluorochemical products were causally connected with or could increase the risk of causing damage to humans and animals, including knowledge of statistically significant findings showing a causal connection between exposure to fluorochemical products

and physical injuries in humans and animals.

383. In connection with the fluorochemical products, Defendants have had and continue to have a general duty of care to disclose to Plaintiff the actual and potential harm to his person as a direct and proximate result of Defendants' acts and/or omissions, including a general duty of care to disclose to Plaintiff that Defendants had, and were continuingly, exposing Plaintiff to harmful levels of fluorochemicals.

384. In addition to its general duty of care, Defendants also voluntarily assumed a duty to disclose to Plaintiff the actual and potential harm to his body as a direct and proximate result of Defendants' acts and/or omissions, including a duty to disclose to Plaintiff that Defendants had exposed, and were continuingly exposing Plaintiff to harmful fluorochemical products, which duty was voluntarily assumed by affirmatively representing to Plaintiff that the Defendants and their fluorochemical exposure were harmless, when Defendants knew and/or reasonably should have known that the Defendants' fluorochemical products caused, and were continuing to cause, bodily injury.

385. Through Defendants' superior knowledge, responsibility, and/or control over the fluorochemical products, and Defendants' voluntary actions and/or representations, a relationship of trust and confidence existed between Defendants and Plaintiff.

386. Despite Defendants' knowledge regarding fluorochemical exposure, and despite Defendants' duties to disclose to Plaintiff, Defendants negligently, maliciously, knowingly, willfully, wantonly, recklessly and/or intentionally withheld, misrepresented, and/or concealed information from Plaintiff regarding exposure to fluorochemical products.

387. Defendants withheld, misrepresented, and/or concealed information regarding fluorochemical exposure from Plaintiff with the intention to mislead and/or defraud Plaintiff into

believing that their fluorochemical exposure was not harmful, and to mislead and/or defraud Plaintiff into continuing to use the fluorochemical products.

388. Defendants withheld, misrepresented, and/or concealed information regarding fluorochemical exposure that was a substantial factor in causing Plaintiff's harm.

389. As a direct and proximate result of the aforesaid acts and/or omissions by Defendants, acting for and on its own behalf and as agent, ostensible agent, employee, conspirator, and/or joint venture of others, Plaintiff was exposed to Defendants' fluorochemical products and was injured.

390. Defendants not only withheld, misrepresented, and/or concealed material information from Plaintiff but also committed fraud against Plaintiff by affirmatively representing to Plaintiff that their fluorochemical products were harmless and/or did not present any risk of harm, when Defendants knew, reasonably should have known, and/or with utter disregard and recklessness as to whether it was true or not, that Defendants' fluorochemical products had caused, and were continuing to cause, bodily injury and/or risk of such bodily injury to Plaintiff.

391. Defendants' representations to Plaintiff were knowingly, intentionally, negligently, and/or recklessly false.

392. Defendants had, and continue to have, a duty of care to provide Plaintiff, with truthful representations regarding the actual and potential harm to Plaintiff's person as a direct and proximate result of Defendants' acts and/or omissions, and Defendants voluntarily assumed a duty of care to provide Plaintiff with truthful representations regarding Defendants' fluorochemical products and the actual and potential harm to Plaintiff's person as a direct and proximate result of Defendants' acts and/or omissions.

393. Defendants' affirmative representations and/or omissions to Plaintiff were false

and were material to Plaintiff in forming Plaintiff's belief that Defendants' fluorochemical products were safe, in causing Plaintiff to continue to use the fluorochemical products, and in causing Plaintiff to not seek treatment and/or ways to remedy Plaintiff's past exposure to fluorochemical products.

394. Defendants made the affirmative representations and/or omissions to Plaintiff with the intention that Plaintiff would be misled into relying on such affirmative representations and/or omissions.

395. Plaintiff relied on Defendants' affirmative representations and/or omissions in forming Plaintiff's belief that Defendants' fluorochemical products were safe in causing Plaintiff to continue to use the fluorochemical products, and in not seeking treatment and/or ways to remedy Plaintiff's past exposure to Defendants' fluorochemical products.

396. Plaintiff was damaged and physically harmed as a direct and proximate result of Plaintiff's justified reliance on Defendants' affirmative, fraudulent representations and/or omissions and, as a direct and proximate result of such justified reliance, Plaintiff continued to use the fluorochemical products.

Sixth Cause Of Action
(Negligence Per Se)

397. Plaintiff incorporates herein by reference each and every paragraph of this Complaint as though set forth in full in this cause of action.

398. One or more federal statutes, including but not limited to 15 U.S.C. §§ 2607 and 2614, 33 U.S.C. §§ 1311(a) and 1342, and 42 U.S.C. §§ 300i-1 and 6921-6939e, impose duties of care on Defendants with regard to Defendants' actions and/or omissions towards Plaintiff and/or Plaintiff's safety.

399. By Defendants' acts and/or omissions resulting in harm to Plaintiff, Defendants

violated and/or continue to violate and/or breach one or more federal statutes and/or duties, including but not limited to 15 U.S.C. §§ 2607 and 2614, 33 U.S.C. §§ 1311(a) and 1342, and 42

400. U.S.C. §§ 300i-1 and 6921-6939e, constituting negligence per se, including liability for all injuries to Plaintiff associated with the fluorochemical products.

401. Defendants' violation of law and breach of its statutory duties directly and proximately caused and continue to directly and proximately cause damage to Plaintiff in the form of economic damage and bodily injury for which Defendants are liable.

Seventh Cause Of Action
(Past And Continuing Trespass And Battery)

402. Plaintiff incorporates herein by reference each and every paragraph of this Complaint as though set forth in full in this cause of action.

403. Defendants have known for several decades that their fluorochemical products are harmful and toxic to humans and animals, and once ingested, will remain in a person's body for a long time, including through binding to blood and/or tissues.

404. Despite such knowledge, Defendants continued to use the fluorochemical products, which caused harmful physical contact with Plaintiff.

405. Defendants' continued actions with knowledge that such actions will result in harmful physical contact with Plaintiff demonstrate intent and/or reckless indifference by Defendants without regard to the harm they have caused and will cause.

406. Defendants' intentional acts and/or omissions have resulted in fluorochemicals, in the body of Plaintiff or otherwise unlawful and harmful invasion, contact, and/or presence of fluorochemicals in Plaintiff's body, which interferes with Plaintiff's rightful use and possession of Plaintiff's body.

407. The fluorochemicals present in and/or on Plaintiff's body originating from

Defendants' fluorochemical products was at all relevant times hereto, and continues to be, the property of Defendants.

408. The invasion and presence of the fluorochemical products in and/or on Plaintiff's body was and continues to be unconsented and without permission or authority from Plaintiff or anyone who could grant such permission or authority.

409. Defendants' intentional acts and/or omissions were done with the knowledge and/or belief that the invasion, contact, and/or presence of fluorochemical products onto, and/or into Plaintiff's body were substantially certain to result from those acts and/or omissions.

410. Harmful contact with Plaintiff's body was the direct and/or indirect result of Defendant's intentional acts and/or omissions.

411. The presence and continuing presence of the fluorochemical products in and/or on Plaintiff's body is offensive, unreasonable, and/or harmful and constitutes a continuing and/or permanent trespass and battery.

412. Defendants' past and continuing trespass and battery upon Plaintiff's body directly and proximately caused and continues to directly and proximately cause damage to Plaintiff in the form of bodily injury, for which Defendants' are liable.

Eighth Cause Of Action
(Negligent, Intentional, And Reckless Infliction Of Emotional Distress)

413. Plaintiff incorporates herein by reference each and every paragraph of this Complaint as though set forth in full in this cause of action.

414. Defendants' acts and/or omissions were negligent, intentional, and/or reckless, including Defendants' continued pollution of the environment and resultant exposure of Plaintiff to harmful fluorochemical products, despite knowing for decades that such exposure was causing and would continue to cause harm and/or unacceptable risk of harm to Plaintiff.

415. Defendants' negligently, knowingly and/or intentionally withheld and concealed material information from and/or affirmatively misrepresented to Plaintiff that they were exposed to harmful fluorochemical products and/or that the fluorochemical products were not causing or creating any risk of harm to them, despite knowing at the time these concealments and/or misrepresentations were made that the fluorochemical products were causing and would continue to cause harm and/or unacceptable risk of harm to persons, including Plaintiff.

416. At the time of Defendants' negligent, knowing, and/or intentional acts and/or omissions, it was foreseeable to Defendants and Defendants were certain and/or substantially certain that its actions and/or omissions would cause emotional distress to Plaintiff.

417. Defendants' acts and/or omissions were extreme, outrageous, intolerable, and/or offended the generally accepted standards of decency and morality.

418. By continuing to expose Plaintiff to harmful fluorochemical products, and continuing to misrepresent to Plaintiff that the fluorochemical products were not and would not cause Plaintiff harm or risk of harm and/or continuing to withhold and/or conceal from Plaintiff material information on such issues, despite knowing that the fluorochemical products were causing and would continue to cause harm and/or risk of harm, Defendants acted in an extreme, outrageous, and intolerable manner which offended any generally accepted standard of decency and morality.

419. Defendants' acts and/or omissions resulting in Defendants' concealment and/or misrepresentations, directly and proximately caused physical harm, and continue to cause physical harm, to Plaintiff.

420. Defendants' extreme, outrageous, and intolerable actions were a substantial factor in causing Plaintiff to suffer severe physical, mental, and emotional distress.

421. As a direct and proximate result of Defendants' extreme, outrageous and intolerable actions, Plaintiff has and will continue to suffer severe physical, mental, and emotional distress. No reasonable person could be expected to endure the mental anguish caused by the knowledge that entities have negligently, knowingly, and/or intentionally exposed them to years of harmful contact with AFFF containing PFOA or PFOS and/or their precursor chemicals, and has furthermore actively misrepresented and/or concealed such danger from them, while reaping hundreds of millions of dollars in profits as a direct and proximate result.

CLAIM FOR PUNITIVE DAMAGES

422. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

423. At all times relevant to the present cause of action, Defendants manufactured, marketed, and sold the fluorochemical products that were used by Plaintiff and that resulted in the physical bodily injuries that Plaintiff has suffered and will continue to suffer.

424. At the time the above-described, affirmative, voluntary, and intentional acts were performed by Defendants, Defendants had good reason to know or expect that their fluorochemical products were toxic chemicals capable of causing harm to human health.

425. Defendants' negligent, reckless, willful, and/or wanton actions and/or intentional failures to act caused Plaintiff to be exposed to fluorochemical products.

426. The willful, wanton, malicious, and/or reckless conduct of Defendants, includes, but is not limited to:

a. issuing no warnings and failing to divulge material information concerning the release of fluorochemicals, including but not limited to PFOA and PFOS;

b. failing to take all reasonable measures to ensure fluorochemical products would be used effectively and properly disposed of; and

c. failing to prevent the foreseeable impacts of fluorochemical exposure upon the Plaintiff.

427. As a result of Defendants' conduct, Plaintiff has been forced to incur and will continue to incur significant costs related to the harm caused by Defendants' fluorochemical products and will continue to suffer serious, debilitating, and severe physical, mental, and emotional distress of Plaintiff's Kidney Cancer caused by Defendants' fluorochemical products.

428. Defendants have demonstrated an outrageous conscious disregard for the physical safety of Plaintiff and acted with implied malice, warranting the imposition of punitive damages.

429. Upon information and belief, Defendants' conduct involved wanton, willful, and/or a conscious and reckless disregard for the health, safety, property, and rights of others. The Court should award the Plaintiff punitive damages in an amount sufficient to deter and punish such conduct.

TOLLING OF THE STATUTE OF LIMITATIONS

Discovery Rule Tolling

430. Plaintiff had no way of knowing about the risk of serious injury associated with the use of and exposure to AFFF until very recently.

431. Within the time period of any applicable statute of limitations, Plaintiff could not have discovered, through the exercise of reasonable diligence, that exposure to AFFF is harmful to human health.

432. Plaintiff did not discover and did not know of facts that would cause a reasonable

person to suspect the risk associated with the use of and exposure to AFFF; nor would a reasonable and diligent investigation by Plaintiff have disclosed that AFFF could cause personal injury.

433. For these reasons, all applicable statutes of limitations have been tolled by operation of the discovery rule with respect to Plaintiff's claims.

Fraudulent Concealment Tolling

434. All applicable statute of limitations have also been tolled by Defendants knowing and active fraudulent concealment and denial of the facts alleged herein throughout the time period relevant to this action.

435. Instead of disclosing critical safety information regarding AFFF, Defendants have consistently and falsely represented the safety of AFFF products.

436. This fraudulent concealment continues through present day.

437. Due to this fraudulent concealment, all applicable statutes of limitations have been tolled by operation of the discovery rule with respect to Plaintiff's claims.

Estoppel

438. Defendants were under a continuous duty to consumer, end users, and other persons coming into contact with their products, including Plaintiff, to accurately provide safety information concerning its products and the risk associated with the use of and exposure to AFFF.

439. Instead, Defendants knowingly, affirmatively, and actively concealed safety information concerning AFFF and the serious risks associated with the use of and exposure to AFFF.

440. Based on the foregoing, Defendants are estopped from relying on any statute of limitations in defense of this action.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment against all Defendants, jointly and severally, on each of the above-referenced claims and Causes of Action as follows:

A. Awarding compensatory damages to Plaintiff for past and future damages, including but not limited, to pain and suffering for severe and permanent personal injuries sustained by the Plaintiff, health care costs, medical monitoring, together with interest and costs as provided by law;

B. Punitive and/or exemplary damages for the wanton, willful, fraudulent, and/or reckless acts of the Defendants who demonstrated a complete disregard and reckless indifference for the safety and welfare of the Plaintiff and of the general public and to the Plaintiff in an amount sufficient to punish Defendants and deter future similar conduct;

C. Awarding Plaintiff reasonable fees for attorneys and expert witnesses;

D. Awarding Plaintiff the costs and disbursements of this lawsuit;

E. Interest on the damages according to law; and

F. Such other and further relief as this Court deems just and proper.

JURY DEMAND

The Plaintiff hereby demands a trial by jury of all claims asserted in this Complaint.

Dated: September 12, 2024

Respectfully submitted,

THE FERRARO LAW FIRM

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